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THE
NATURALIST'S REPOSITORY,

OR
Monthly Miscellany

OF

EXOTIC NATURAL HISTORY:

CONSISTING OF

ELEGANTLY COLOURED PLATES WITH APPROPRIATE SCIENTIFIC
AND GENERAL DESCRIPTIONS

OF THE MOST CURIOUS, SCARCE, AND BEAUTIFUL

PRODUCTIONS OF NATURE

THAT HAVE BEEN RECENTLY DISCOVERED

IN VARIOUS PARTS OF THE WORLD;

AND MORE ESPECIALLY SUCH

NOVELTIES

As from their extreme Rarity remain entirely undescribed, or which have not been
duly noticed by any preceding Naturalists.

THE WHOLE COMPOSED ACCORDING TO

THE LATEST IMPROVEMENTS IN THE VARIOUS DEPARTMENTS OF

The Science,

AND FORMING COLLECTIVELY A TRULY VALUABLE

COMPENDIUM OF THE MOST IMPORTANT DISCOVERIES

OF

QUADRUPEDS, BIRDS, FISHES, INSECTS, SHELLS,

MARINE PRODUCTION,

AND EVERY OTHER INTERESTING OBJECT OF NATURAL HISTORY,

THE PRODUCE OF FOREIGN CLIMATES.

BY E. DONOVAN, F.L.S. W.S. &c.

VOL. I.

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The Twelfth Number of this work is now respectfully submitted to the attention of the public. This number, accompanied by the Title Page and Index, renders the first volume complete. The Subscribers, therefore, are now enabled to form a correct idea of the nature and object of the undertaking: and from the style in which it has been so far conducted, to form some conclusion of that in which it is likely for the future to be continued.

The general approbation that has been bestowed already upon this publication can be best appreciated from the extent of sale, which, to say the least, has been respectable from the commencement, notwithstanding that the undertaking was began under the manifest disadvantage of being little known, and the very knowledge of its existence being still in no small degree circumscribed. It is not, therefore, without a sense of grateful feeling that the author has observed that besides the incidental sale of the different detached or monthly parts selected by purchasers desirous of the plates and descriptions of some particular object of rarity, that the number of regular subscribers, instead of diminishing, has rapidly advanced with the publication of each number in succession, and as it seems to appear in proportion as the public became better acquainted with its merits, and the more assured of its uninterrupted continuance. While this testimony of approbation prevails, the author of this undertaking will be duly stimulated to exert his best means of rendering it deserving of their consideration. Nor has he any hesitation in believing that it will be in his power, under the auspices of public favour, to produce a work of much elegance, and no mean utility, either as a work of taste for the library of the general reader, or the admirer of nature; the folios of the amateur, or the professed Study of the experienced Naturalist.

The commencement of this work was necessarily preceded by a few observations upon the nature and object of the undertaking: those observations are no less appropriate on the present occasion than the former,

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and for this reason we shall again advert to them in restating the intention the author has in view. The NATURALIST'S REPOSITORY, or MONTHLY MISCELLANY OF EXOTIC NATURAL HISTORY, is designed to comprehend in the most commodious form, a miscellaneous assemblage of elegantly coloured plates, with appropriate scientific and general descriptions of the most curious, scarce, and beautiful productions of nature that have been recently discovered in various parts of the world or may hereafter occur to the notice of the author; and more especially of such novelties as from their extreme rarity remain entirely undescribed, or which have not been duly noticed by any preceding Naturalist.

Most readers, it is presumed, will be aware that the labours of the author's life, during a course of many years have been directed to the pursuits of natural science: labours not confined to any one particular branch or department of the varied face of nature, but extending generally to the whole. The endeavours of the author to elucidate the Natural History of the British Isles are sufficiently known from the various extensive works which have been produced by him during the course of the last thirty years, and the magnitude which those works have at length acquired in the progressive course of publication that had been adopted, is the best criterion of the approbation that has attended them. But it is not within the views of the author in this place to expatiate upon a subject which might be deemed irrelevant, the works alluded to being devoted solely to the productions of our native country, while the avowed object of the present undertaking is to comprehend a selection of those only which are peculiar to foreign, and with few exceptions, to extra European climates. The chief motive of the author in adverting to those works, is to point out a style and mode of execution for the present undertaking, which, from the very extensive patronage those former labours of the author have experienced, may be considered applicable in a very peculiar degree to every purpose of correct elucidation, and as one most likely to ensure by its elegance and perfection that same proportion of general approbation which the other productions of the author have obtained.

With respect to the means within the author's power of rendering this work deserving of the public notice, either as to the novelty, variety, rarity, or beauty of the various objects it is destined to embrace, the author must rather trust to the favourable opinion which the world may entertain in its behalf, from the examples now submitted to consideration,

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than to any preliminary observations he can offer : he shall only presume respectfully that they are adequate to the purpose, and calculated to answer every moderate expectation his preliminary observations may have excited.

It will be readily conceived that the opportunities of the author's life, so assiduously devoted to the Science of Nature, must have enabled him to enrich his *port feuilles* with a collection of DRAWINGS, MANUSCRIPTS, and MEMORANDA of no mean importance in all its branches. This is perfectly correct. His own Museum confined chiefly, but not exclusively, to the productions of Great Britain, have afforded many rarities, the offspring of foreign climates, which could not elsewhere be procured. But independently of those resources which his own collection has afforded, his other means have been amply extensive. Through the kindness of his scientific friends, he has had unlimited access to many other collections of acknowledged moment, for the purpose of enriching his Collectanea with drawings and descriptions of the more interesting rarities which those cabinets respectively contained. Some of those collections exist no longer and are probably now forgotten, but the memory of others, even among the number of those which have passed away, will ever be cherished with regret in the mind of every man of science by whom their merits were understood. The preservation even of the memorials of some minor portion of the rarities which those collections once embodied can scarcely fail to prove of interest at the present day, while their total loss to the rising generation will be in some degree appreciated from the memoranda and occasional references that will appear respecting them in the progress of the present work: to enumerate the many collections of private individuals, the rarities of which have contributed to render this collection of the author's drawings important, would extend our advertisement far beyond our intended limits. It may be sufficient to observe that the late Leverian Museum, rich in every branch of Natural History, has tended in an eminent degree to this effect ; the author having been favoured with unreserved permission to take drawings and memoranda of whatever he deemed important, besides having subsequently enriched his own Museum with a very ample portion of that fine collection, by public purchase, at the time of its dispersion ; particularly in the different tribes of the Mammiferous animals, in Ornithology, Ichthyology, and various others ; and also with every object materially important among the extraneous fossils which that splendid museum originally contained. It will be

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also seen from many of our pages that through the kindness of the late worthy President of the Royal Society, Sir Joseph Banks, the rich and truly scientific collection of that munificent patron of the sciences was ever open to us for the furtherance of our pursuits in Natural History; and of the object of the present work among others. The collections of Mr. Drury, and also that of Mr. Francillon, in the particular branches of Entomology, are too considerable to be passed slightly over: the rarities of both these collections have in an eminent degree improved our means of rendering this work important. And lastly we may mention among other scientific acquisitions the Collectanea of drawings formed by the pencil of the late Mr. Jones of Chelsea, together with the manuscripts of Fabricius in elucidation, as a treasure which cannot be too highly appreciated when we recollect the importance of the Fabrician writings on the continent, and remember also that those drawings afford the only illustration of the most splendid portion of the insect race which that author exclusively describes, and by which very many of the species can alone be now determined.

In conclusion of these remarks it may be observed, however, that while in our elucidation of those rarities which the collections and museums above adverted to have so amply afforded, we render a deserved tribute of record to the liberality of those whose services in the cause of Natural History have so amply contributed to its advancement in former days, the author will not remain unmindful of those advantages which the many valuable collections of the present period offer. It will appear as this work proceeds that he is in no small degree indebted to the favor of many eminent scientific characters of our time, as well as those who have preceded them, for their permission to take drawings and descriptions of such rarities in their collections as really appear worthy of distinct consideration. And it may be added finally that he shall at all times avail himself with pleasure, and acknowledge with thanks, any further advantages of the same kind which the favours of others may be induced to allow for the purpose of enriching the present undertaking.

LAMBETH,
March 1st, 1823.

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THE BINDER

Is requested to observe that the Numbers have been transposed by mistake upon the Three following Plates.

For Plate 27 read 25.

Plate 25 read 26.

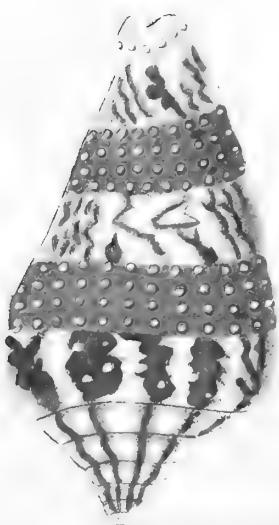
Plate 26 read 27.

And place the plates with their respective descriptions according to this correction.



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3.



2.

THE
NATURALIST's REPOSITORY.

&c. &c. &c.

CONCHOLOGY.

PLATE I.

FIGURE I.

CONUS AMMIRALIS var AMBOINENSIS.

**THREE-BANDED AMBOYNA HIGH-SPIRED
ADMIRAL SHELL.**

UNIVALVE.

GENERIC CHARACTER.

Animal a limax. Shell univalve, convolute and turbinated. Aperture effuse, longitudinal, linear, without teeth, entire at the base: pillar smooth.

B

PLATE I.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell with rough punctures at the base.

CONUS AMMIRALIS : testa basi punctato scabra.

CONUS AMMIRALIS : testa basi punctato. *Linn. Syst. Nat.* 10
p. 714. n. 257.—Mus. Lud. Ulr. 553. *n. 157.*
Gmel. Linn. Syst. Nat. 3378. 10.

CONUS AMMIRALIS *var AMBOINENSIS.* *a.* Spire high and tapering; shell pyriform, glossy, smooth, pale yellowish with two broad bands of testaceous marked with large subsaggitate oval spots of white, and a narrow band between composed of white spots and intermediate testaceous dots.

Were it within the contemplation of our present views to enter into the ancient history of the science of **Conchology**, we should be under little difficulty in demonstrating upon the authority of the best informed historians as well as ancient classics that it has a claim to very remote antiquity. The study of Shells prevailed, at least to some extent, in those early times when the generality of mankind believe the world to have been buried in the depths of ignorance. At periods, even when some among those of better information may be inclined to imagine that the ancients could have had no very accurate conceptions of the nature of these bodies, or of their classification, natural or artificial, and even when it might be supposed from the warlike temper of the age the collecting of shells would have been deemed an unworthy occupation, we discover sufficient indications

CONCHOLOGY.

to prove that their leisure hours were so employed. The productions of the sea were delineated in their manuscripts; Pliny speaks of the delight the artist took in painting the asterias, or sea stars. The spontaneous offerings of the ocean were depicted in their natural colours upon the walls of their dwellings, abundant evidence of which appears among the ancient paintings of Herculaneum and Pompeii; and that the shells themselves were sometimes collected by the ancients is placed beyond a doubt from those remains which have been found, at various times, among the relics of those celebrated ruins, and also among the ruins of the Roman town, perhaps no less ancient, denominated La Scava.

It is declared by Pliny, in the ninth book of his *Natural History*, that the Romans of his time were better acquainted with the productions of the sea than the animals of the land, a circumstance he attributes, and unquestionably with sufficient reason, to the extravagant excess to which the luxurious taste of those times was carried. This will excite the less surprise when we recollect the various useful results deduced from this investigation. Of these we have several very memorable examples; the exquisite dyes of green, the scarlet, and the imperial purple, which they possessed and prized so eminently, were all the produce of testaceous bodies. And so likewise the pearls gathered from the various perlaceous livalve shells; and pearls we are assured were in those days valued at Rome, as in Egypt, at a price infinitely beyond that of gold and gems, the diamond alone excepted.

Pliny tells us, that, in his time, after the diamonds of India and Arabia, pearls were esteemed most precious, and that we may be

PLATE I.

under no error as to the application of the text to the pearls found in shells, he further adds, that he had before spoken of these pearls in his book that treats upon the productions of the sea*. The diamonds in those times were so scarce, and esteemed so highly, as to be little known, except among princes, the smaller and most inferior kinds alone excepted. The pearls were the most costly jewels employed in the ornaments for the ears, the neck, and fingers of the fair sex, and the shells themselves were converted into various articles of finery for their wardrobe and furniture.

But it is not, as before observed, within our province in this place, to enter into any such latitude of explanation as an ample illustration of these remarks may be conceived to merit. It is our object only to express ourselves in general terms: it may be sufficient therefore to observe, that among the luxuries of the great in the times of Pliny, Oppian, and Juvenal, it is certain they indulged their peculiar taste in the study of these productions of the deep. They not only amassed together the more curious among those shells whose beauty attracted their regard, they entered also to some extent into their history and manners, and were sufficiently informed as to their natural properties to render them subservient to the general purposes of luxury and life. They knew the distinctions between the land, the fresh-water, and the marine tribes of shells, and they proceeded with minuteness and sometimes fully into their

* (Adamas.) *Proximum apud nos Indicis Arabicisque margaritis pretium est, de quibus in nono diximus volumine inter res marinas.*" *Plin. Hist. Nat. lib. 37, cap. 4.*

CONCHOLOGY.

history. No classic reader of the Halieutics of Oppian will doubt the general acquaintance of the ancients with those beings in their native element, nor will any one imagine, who is conversant with the lives of the philosophers of the infant ages of the world, that the study of Conchology, even as a science, was unknown. So many writings of the ancients, even of the classic ages of Greece and Rome, have disappeared, that it may be now impossible to form any very accurate conclusions, at the same time that enough remains to justify our persuasion that it was far from inconsiderable. Among others, the works of Aristotle, the preceptor of the Macedonian conqueror Alexander, have survived the ravages of time, and very happily, for the history of human knowledge unfolds to us the views which the ancients had then taken of natural science, and among the rest of the science of Conchology; and there is, moreover, every reason to believe that in the classification of the testaceous tribes, or shells, which the writings of this philosopher present us, we, in reality, possess the arrangement of the shells composing the Conchological collection of that most potent monarch, the conqueror of the world:—the classical distribution of the shells of the great Alexander, as they were disposed by the most celebrated naturalist of his age, and at a period more remote than three centuries before the commencement of the Christian æra.

The Science of Conchology, like that of all other branches of nature, has undergone its mutations at various periods. Generally, it has held a rank of some eminence, a circumstance attributable no doubt to the peculiar beauty of this interesting tribe. In speaking of the latter times, the period of the last and preceding centuries, it would be difficult to determine in which country of civilized Europe

PLATE I.

the science of Conchology has been most esteemed; at one time, the virtuosi of Holland, at another of France, and latterly of Britain, have endeavoured to produce the most extensive and costly cabinets of Conchology, and each in consequence may perhaps have excelled alternately; nor were other countries of Europe in this respect less emulous, or materially deficient in the number and excellence of their collections in this department of nature, during the same periods.

We have been unavoidably led into this train of digression and remark from a due consideration of the very interesting history connected with the shells which form the subject of the annexed Plate, the particulars of which, it is presumed, will be found to justify the general tendency of these observations, and these remarks may be considered also as a prelude to the introduction of many others among the number of those rarities which it is within our contemplation to produce progressively in the course of the present work; shells, to which the prevalence of general taste has assigned a value and importance scarcely less considerable than the nonpareil cones, or the eminently celebrated cedo nulli.

The first shell in the plate before us that invites attention from its magnitude is that superb cone delineated at figure 1. This shell, which once held a distinguished place in the Leverian Museum, is two inches and six-eighths in length, its greatest breadth one inch and three-eighths. The general colour pale yellowish, with two bands of chesnut, marked with irregular arrow-headed spots of white, and an intermediate narrow band composed of white spots of the same form, each connected by means of an intervening dot of

CONCHOLOGY.

chesnut, which, together, form a catenated band of peculiar elegance. When very closely examined with the aid of a magnifier, the whole surface of the shell appears finely reticulated with yellow.

This shell was sold in one of the latter day's sale of the Leverian Museum for the sum of five guineas and a half.

FIGURE II.

CONUS AMMIRALIS var AMBOINENSIS β .

SIX-BANDED AMBOYNA HIGH-SPIRED ADMIRAL SHELL.

Spire high and tapering; shell subpyriform; smooth, pale yellowish, sprinkled with fulvous; body-wreath with six bands, the three uppermost linear, and composed of alternate white and chesnut-coloured dots, the three lower of two broad castaneous bands, marked with subsaggitate oval spots, and an intermediate narrow belt of alternate brown and white dots.

This shell, like the former, (fig. I) constituted part of the Leverian collection of exotic shells. Its length is an inch and half, its greatest breadth exceeding five-eighths of an inch.

Notwithstanding the inferiority of its size, this very elegant and curious shell is not less interesting than the preceding. The general

PLATE I.

tints in both are nearly the same, but in the present shell are rather deeper, the dots of fulvous brighter and more thickly sprinkled, and the bands more numerous. Like the former shell it has two broad bands of brown, chequered with subovate spots of white, and an intermediate dotted line, but these are placed rather nearer towards the narrower end of the shell, and the intervening space between the spire and the larger band, encompassed or girt round with two other linear bands, composed of white and brown dots, besides another still more conspicuous, and composed of larger spots along the base or body-wreath, contiguous to the spire or turban.

This little shell may be considered as affording an excellent type of one of the rarer kinds of *Conus Ammiralis*, the variety denominated the Six-banded high-spired Admiral Cone. During a period of some years that have now elapsed since the dispersion of that collection, no other example of this variety has occurred to our observation more perfect and characteristic in all its markings.

FIGURE III.

CONUS AMMIRALIS var **CEDO NULLI** a.

OLIVE-BANDED NONPAREIL CONE.

Spire high and tapering; marbled white, fulvous, and dusky; body-wreath with three subolivaceous bands, the broadest towards

CONCHOLOGY.

the spire, with four belts of whitish dots; the two others towards the narrow end each with a single row of dots.

If in the preceding instances we have produced some novelties worthy of particular attention, the present shell, in point of value as well as beauty, must also lay a distinguished claim to our consideration. This is one of those rare varieties of *Conus Ammiralis* denominated the **CEDO NULLI**, or **CEDO NULLI pretiosissimus**, in allusion to the incomparable value affixed to the varieties of this peculiar species. The importance attached to the shells of this kind may indeed be best conceived by stating that some of its varieties have been valued at twenty, fifty, and one hundred guineas; one, in almost every respect resembling that delineated at figure 4, the celebrated **Cedo Nulli** of Lyonet's cabinet, was valued by Lyonet himself, about the year 1732, at three hundred guineas; and either this shell, or another very similar to it, actually realized a sum of **1200 florins**.

As the shells of this kind may very justly be presumed to be of the first rarity, every trait of information that may appear calculated to elucidate their history, it is presumed, will not only be permitted but be deemed acceptable, and under this impression the ensuing observations are submitted.

Much about the æra of the first explosion of the French Revolution of 1789, and within the space of a few years after, it is perfectly well known that many of the choicest cabinets and collections of rarities that had before been the pride of France and

PLATE I.

Holland were consigned to this country for the sake of safety, and being in some instances afterwards dispersed, had tended, in no small degree, to enrich the cabinets of our own country. It was at this period that many very rare shells occurred to our observation which have since disappeared, and among others, several of those varieties of *Cedo nulli* which had been before held in other parts of Europe in considerable estimation. In the year 1797 we saw no less than five specimens of this rare shell, all varying a little from each other, in the cabinet of the French Minister of State, M. de Calonne; in one, the colour was pale, in another deeper, one was lineated, and another distinguished by having three distinct bands.

At the dispersion of the Calonnian Museum, which took place by public sale rather more than twenty years ago, the series of these valuable shells passed into the fine collection of the present Earl Tankerville, a collection his lordship was then forming for the pleasure of an amiable and beloved daughter since deceased, and these shells are still considered among the more choice rarities of that valuable cabinet.

The shell, however, more immediately under our consideration, the variety, delineated at figure 3, is from another source; it was among the spoils of rarities sent over to this country from Holland, at the time of the insurrection connected with the first inroads of the French into that country. The shell passed into the hands of a merchant of curiosities in London, and being afterwards sold, its destination is uncertain; the price affixed was twenty guineas.

This shell corresponded very nearly with the variety denominated Seba's *Cedo nulli*, having once formed a part of the museum

CONCHOLOGY.

of the celebrated Seba, but it could not be the same, because the entire collection of Seba, which at the period of the French invasion constituted part of the Royal Museum of the Stadholder, was carried into France and its contents distributed among the other objects of natural history in the French Museum*. The description which Favanne has left us of the **CEDO NULLI DE SEBA** is in the following words, and will be found on a near comparison to accord pretty accurately with our present shell:—" *Le Cedo nulli de Seba, à large bande citron foncé, chargée de quatre cordelettes de grains inégaux, blancs, bleus, rouges et orangés. Le reste de sa robe est fascié et marbré d'orangé-brun, de jaune, de rouge et bleu-pâle sur un fond blanc avec deux bandes grenues vers le bas.*"

FAVANNE, t. ii. p. 422.

FIGURE IV.

CONUS AMMIRALIS var **CEDO NULLI** ♂.

FULVOUS NONPAREIL CONE.

Spire high and tapering, fulvous reddish and orange, varied and marbled with white; two orange bands, each with four belts of white dots, and a single series near the tip.

The shell from which this drawing is taken fell also into the possession of the same individual as the last, and much about same

* Vide *Annales du Museum National.* An. xi, (1802) *Primier Cahier.*

PLATE I.

period. This rarity was disposed of, as I have been informed, at a price exceeding that of the former, and passed shortly after, I believe, into the Imperial cabinet, at Vienna, or otherwise into one of the continental cabinets in the north of Europe, a circumstance we have not, at this distant period, any means whatever of determining.

The accordance between this shell and the celebrated *Cedo nulli* of Lyonet's cabinet, which, as before intimated, was estimated at the value of three hundred guineas, will not escape the remark those who are acquainted with the description of Lyonet's shell: According to Favanne there were two or more varieties of the *Cedo nulli*, in his time, in France, that bore a very near resemblance to the shell of Lyonet; he speaks of one in the cabinet of Madame La Presidente de Bandeville, which differed in its marbling of white: in being larger and more prolonged upon the top of the first whorl, ather larger, and interrupted with veins of orange, and the last of the two belts of white spots which follows this zone near the bottom of the first whorl, composed of rather larger spots; with these exceptions the two shells were precisely the same.

The *Cedo nulli* of Lyonet is described as being of a yellowish colour, divided into bands, the lower one and that in the middle marbled with white, the other two marked, the one with four little belts with white dots, the second with only three *.

* *Le Cedo Nulli à bandes, ou dont la robe jaunâtre se partage en quatre bands, l'inferieure et celle du milieu sont comparties de marbrures blanches, les deux autres sont remplies, l'une de quatre cordelettes à point blanches, la second de trois seulement.* *Tom. 1, p. 442.*

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I ought not to close these remarks without observing, that these shells vary so considerably that no two specimens have yet occurred that agree precisely with each other. Some approach also, but are clouded instead of banded; these are the French *Cedo nulli graphique*, *Conus mappa* of Solander, and being held in less esteem from having their colours disposed in clouds instead of bands, have obtained the name of the false *Cedo nulli*. The transitions of these shells, it must be confessed are so various as to render it extremely difficult, if not unsafe, to determine where one species ends and another commences, the difference in the colours affords no sufficient data, neither is the form of the shell, nor the height of the spire so uniformly certain as to constitute a precise criterion.

Linnæus, in his description of the conchological cabinet of her majesty *Ludovica Ulrica*, the Queen of Sweden*, speaks of three different varieties of *Conus Ammiralis* α *Ammiralis summus*, β *Ammiralis ordinarius*, γ *Ammiralis occidentalis*, and these are again recited in his *Systema Natura*. But it will be seen from the last edition of that work, by Professor Gmelin, that the varieties discovered subsequently to the age of that inestimable naturalist are very considerable, amounting to no less than thirty different kinds, and these do not include the whole at present known. Gmelin, it should be added, admits only two or three kinds as the true **CEDO NULLI**, which he characterizes essentially as being encompassed with dotted articulated belts, *Cedo nulli cingulis punctato-articulatis*; one he describes as being yellow, painted with red, and marked with eleven distinct belts of milk white; another, orange with crowded elevated interrupted chesnut lines.

PLATE I.

These shells inhabit chiefly the South American Seas ; the true *Cedo nulli*, as it is called, has been found at Grenada. Some of the varieties of *Conus Ammiralis*, are not very uncommon, and are in infinitely less esteem than others ; for, as it has already appeared, it is in proportion to their rarity in addition to some peculiarity in the colours and markings, and most especially in their disposition into the form of bands, that taste and fancy has affixed a value so considerable as that which these shells are sometimes known to bear.





London. Published by E. Donovan & Simkin & Marshall. April 1st 1822.

ORNITHOLOGY.

PLATE II.

TROGON VIRIDIS.

YELLOW-BELLIED GREEN TROGON,

OR

CURUCUI.

ORDER

PICÆ.

GENERIC CHARACTER.

Bill shorter than the head, sharp edged, hooked margin of the mandibles serrated : feet scansorial or formed for climbing.

SPECIFIC CHARACTER

AND

SYNONYMS.

Green gold, beneath luteous ; chin black ; on the breast a green gold band.

PLATE II.

TROGON VIRIDIS: *viridi-aureus, subtus luteis, gula nigra, fascia pectorali viridi-aurea.* *Gmel. Linn. Syst. Nat.* 2. 404. n. 3.

TROGON VIRIDIS, *Linn. Syst. Nat. edit.* 12. 1. *p. 167.* 3.

Trogon Cayanensis viridis. *Briss. av.* 4. *p. 168.* *n. 2 t. 17.*

Couroucou á ventre jaune. *Buff. Ois.* 6. *p. 291.* *Pl. Enl.* 195.

TROGON VIRIDIS: *viridi-aureus subtus luteis, gula nigra, retriciibus utrinque tribus extimis oblique et dentatim albis.* *Lath. Ind. Orn.* t. 1. *p. 199.* 2.

Yellow-bellied Curucui. *Lath. Gen. Syn.* 2. *p. 488.* 2.

—

This curious and very elegant bird is about twelve inches in length; the bill an inch long and of a pale cinereous or ashen hue, and, like most other species of this remarkable genus, serrated along the margin. The legs are feathered to the toes, and with the toes and claws are of a pale brown.

The colour of the head and neck of this species is black, very richly glossed with blue, which appears, in different directions of the light, highly splendid upon its surface. Upon the crown of the head the blue verges into violet and purple, and in descending towards the neck becomes changeable into a fine green, glossed with gold; these brilliant hues appear also on the sides of the neck, and passing round as a kind of pectorial band forms in particular a rich zone of golden green upon the breast.

The pale ashen hue of the bill is singularly contrasted with the deep black and violet of the head and neck, and the sudden transi-

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tion of the colours of the body is no less remarkable, the plumage in this part becoming abruptly of a fine yellow from the breast down to the thighs; these latter are black, but the vent feathers beyond are of a fine yellow, like the colour of the abdomen. The upper parts of the body are green glossed with yellowish and partaking of a golden lustre. The upper wing coverts and scapulars are dark fuscous, mottled with greyish; the quill feathers dark brown, quills from the base to the middle white. The tail is cuneated or wedge-formed, the middle feathers being longer than the outer ones. These feathers are most singularly contrasted with the rest, being of a fine dark green, glossed with gold, and at the tip black, while the three outer feathers on the contrary are white, and from the base downwards nearly to the tip very elegantly marked with oblique indented bars of black, leaving the tip of each feather immaculate; the inner one of these three exterior feathers are the same length as the dark ones, but the next outer feather is shorter, and the extreme exterior feather on each side shorter than the latter.

There is a variety of this bird in which the belly, instead of being yellow, is white; the whole bird is a trifle smaller than the example now before us, and may possibly prove hereafter to be the same species, in a less mature state of plumage. Buffon calls it *Le Couroucou verd.*

All the birds of this tribe at present known are inhabitants of the warmer climates of South America and India. Our present subject is a native of Cayenne, where it lives in damp and retired woods, building upon the lower branches of trees and feeding chiefly

PLATE II.

upon insects, with which the trees and herbage in those countries abound.

This truly interesting and very beautiful species is already known in our language by the epithet of the yellow-bellied Tropic or **Curucui**. There is, however, another bird of the same genus, which has the belly yellow, as in the present bird; we allude to the **Rufous Curucui**, the better therefore to define our species we have denominated it the yellow-bellied **Green Tropic**, or **Curucui**, as the least attention to the difference in the general colour of the plumage will thus enable the most cursory observer to discriminate the two species with facility and accuracy.



ENTOMOLOGY.

PLATE III.

FIGURE I, I.

PAPILIO CODOMANNUS.

CODOMANNUS BUTTERFLY.

ORDER

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip and generally terminating in a knob: wings erect when at rest. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, deep black with sanguineous bands: posterior ones beneath with annular yellow lines and dots of blue.

PLATE III.

* DANAI FESTIVI *Fabr.*

PAPILIO CODOMANNUS: alis integerrimis atris sanguineo fasciatis: posticis subtus lineis annularibus flavis punctisque cœruleis. *Fabr. Spec. Ins. t. 2. p. 57. n. 253.*—*Mant. Ins. 2. p. 28. n. 292.*—*Ent. Syst. t. 3. p. 1. p. 53. n. 165.*

Alae anticæ supra atrae basi fasciaque, quæ margines haud attingit, sanguineis. Punctum fulvum transversum versus apicem et margo apicis albo punctatus. Subtus fere concolores fascia tantum flava et striga cœrulea apicis. Posticæ supra atrae vitta abbreviata fulva, subtus atrae lineis annularibus flavis punctisque cœrulescentibus. Pectus albo punctatum. *Fabr.*

PAPILIO CODOMANNUS alis integerrimis atris sanguineo fasciatis: posterioribus subtus lineis annularibus flavis punctisque cœruleis. *Gmel. Linn. Syst. t. 1. p. 5. 2280. n. 473.*

The delineations of the very beautiful butterfly that appears in the annexed plate, are copied from a specimen in the cabinet of the late worthy president of the Royal Society, Sir Joseph Banks.

Fabricius had previously observed and made known throughout Europe the description of this species with many others of the Banksian Cabinet, but the figures of it now submitted to the

ENTOMOLOGY.

amateur are the first that have appeared.—When we consider the celebrity which the entomological writings of Fabricius have acquired it may be satisfactory to learn that the delineation now before us is copied from the individual specimen which Fabricius had described, and that no other figure of this very interesting *Papilio* is extant.

The upper surface of the butterfly is of a dark brown colour of peculiar richness, crossed by stripes of deep scarlet. The insect with expanded wings displayed in a flying position in the lower part of the plate exemplifies this aspect of the upper surface. The lower surface is much more beautiful; the marks and colours on the anterior pair possess nearly the same character as those of the upper surface; the posterior pair are very different, being marked with large annular bands of bright yellow upon a fuscous ground, and inclosing a number of distinct spots of coerulean blue, which in beauty emulate the brilliancy of the finest ultra marine: three of these blue spots are placed in the dark ground upon the disk, the remainder are disposed in a semi-circle upon a band of black towards the posterior extremity of the wings. This appearance is best perceived when the insect appears in a resting position as it is seen on one of the branches of the mimosa in the upper part of the plate.

This insect is a native of Brazil.

PLATE III.

FIGURE II.

PAPILIO PYRAMUS.

PYRAMUS BUTTERFLY.

ORDER

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob ; wings erect when at rest. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, fuscous glossed with blue, and marked with a fulvous spot ; lower wings beneath grey.

PLEBEJI RURALES, *Fabr. Sp. Ins.*

HESPERIA RURALES, *Fabr. Ent. Syst.*

PAPILIO PYRAMUS : alis integerrimis fuscis coeruleo micantibus, macula fulva, posticis subtus griseis. *Fabr. Spec. Ins. 2 p. 130. n. 590.—Mant. Ins. 2 p. 83. n. 755.*

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HESPERIA PYRAMUS: *Fabr. Ent. Syst. t. 3. p. 1. 323. n. 223.*

Alæ omnes fuscæ, cœruleo micantibus: macula magna, in medio fulva. Anticæ, subtus conco-
lores, posticæ griseæ sive cinereo fuscoque
variæ. *Fabr.*

Fabricius describes *Papilio Pyramus* as a new species of the genus from the drawings of the late Mr. Jones, of Chelsea, a gentleman of fortune who had long devoted his attention to this peculiar tribe of insects, the *Papiliones*, and whose labours tended in a very eminent degree to aid those of Fabricius. In return for this assistance, Fabricius affixed to each of those insects the names under which they were destined afterwards to appear before the world, a circumstance that may explain sufficiently the frequent references of the Fabrician writings to those drawings, first in his *Species Insectorum*, and subsequently in his *Entomologia Systematica*. It may be further added, that the whole of these drawings, together with the manuscripts in the hand-writing of Fabricius were long in our own possession, during the life-time of the very amiable proprietor, Mr. Jones, for the very liberal purpose of copying and making known to the public whatever might appear likely to us to promote the interest and advantage of the Science of Nature; and that the insect now before us is one of those very rare species copied for this purpose.

The specimen from which the painting of Mr. Jones was taken formed originally part of the collection of the lamented Mr. Yates, the ingenious author of an English translation of the Linnæan *Fundamenta Entomologia*, that appeared about forty years ago, and

PLATE III.

who lost his life by bathing in the river some short time afterwards.

There was a variety of this insect, pretty nearly but not exactly according with this in the collection of an old and well-known entomologist, the late Mr. Drury, a figure of which appeared shortly after the publication of the Fabrician writings as the true *Phphilio Pyramus*. It was not precisely the same as it appeared to us from an inspection of the specimen in the cabinet of Mr. Drury. This insect is to be found represented in the 23rd plate of the third volume of the Exotic Insects of that author, published in the year 1782.





CONCHOLOGY.

PLATE IV.

VOLUTA SCAPHA var **NOBILIS**, **NOBLE CHINESE VOLUTE.**

UNIVALVE.

GENERIC CHARACTER.

Animal a limax. Shell uniocellar, spiral; aperture without a beak and sub-effuse: pillar twisted or plaited: generally without lips or perforation.

* Ventricose, spire papillary at the tip, or terminating in an obtuse rounded eminence.

SPECIFIC CHARACTER

AND

SYNONYMS.

Var NOBLE CHINESE VOLUTE: Shell smooth clouded with zig-zag brown lines, pillar blueish and four plaited: lip subulate.

E

PLATE IV.

VOLUTA SCAPHA (var, **NOBILIS**) testa lævi nebulosa ; lineis angularibus fuscis columella cærulescente quadruplicata, labro subulato.

VOLUTA SCAPHA : testa rudi nebulosa : lineis angularibus fuscis columella cærulescente quadruplicata, labro subulato—*Gmel. Linn. Syst. Nat. t. 1. p. 6. 3468. 121. Hist. Conch. t. 799. f. 6. Kircher 3. f. 10. Bonanni, c. 3. 113. f. 10. Klein Ostr. t. 5. f. 94.*

The fine example from which our figure of this rare and interesting Volute is taken, once held a distinguished place in the Conchological department of the celebrated museum of Sir Ashton Lever. The length of this shell is four inches and one eighth, its greatest breadth two inches and three eighths ; the colour a kind of buff with an olivaceous tint, and the whole surface traversed with a number of irregularly undulated or zig-zag lines of dark brown, disposed longitudinally throughout : the peculiar character of which will be conceived more readily from the delineation than from any explanation that can be conveyed by words. These longitudinal lines are numerous upon the back or superior surface of the first wreath of the shell, and extends also on the lower surface as far as the dilated space of the columella or pillar lip ; which latter is of a pure white and destitute of any markings. The mouth or aperture with the interior of the shell is also white, and the plaits of the pillar, which constitutes one of the most essential characters of the genus Volute, are prominent and well defined.

CONCHOLOGY.

This species of *Voluta* has long retained its reputation as a shell of distinguished rarity; it was very rare in the time of Kircher and Bonanni, and it has continued scarce even to the present period. At the sale of the Leverian collection, the example of which the delineation is now before us, produced the sum of five guineas and a half: since that time other specimens of the same species have occurred occasionally to observation, but which have still maintained an equal price in proportion to their excellence or perfection. The Leverian shell was a most select example, and has not been surpassed in point of beauty by any of the specimens we have since seen. At the dissolution of that inestimable museum, which happened in the year 1806, this admirable shell passed into the possession of the worthy secretary of the Linnæan Society, A. Mc. Leay, Esq. and it still constitutes a part of the fine Conchological collection of that very eminent naturalist.

The late Dr. Solander, as it appears from his manuscripts preserved in the library of the late worthy President of the Royal Society, Sir Joseph Banks, Bart. had designated this kind of *Voluta* by the name of *Nobilis*; it is a fine shell and not unworthy of that distinguished appellation. It is however certain, that it is no other than a variety of *Voluta Scapha* of the Linnæan school *, and as the changing and transposition of names that are sufficiently explicit

* This shell, though sufficiently intelligible among the figures of Kircher's shells, engraved and published by Bonanni, and also in the works of Lister and some others, escaped the notice of Linnæus. So late as the tenth edition of *Systema Natura* it does not appear. Gmelin describes this shell with much accuracy in his edition of the last mentioned work, under the specific name of *Scapha*.

PLATE IV.

and well understood can only tend to create confusion instead of aiding the pursuits of science, we can have no hesitation in retaining it under its former designation. As a variety, we admit this shell to be distinct and well defined, and to be so far prominent as to merit a definitive appellation; and it is under this persuasion the term **Nobilis**, assigned but by Dr. Solander, is subjoined to the specific name **Voluta Scapha**.

This very rare kind of **Voluta Scapha** is from China, the variety more coarse in its general appearance than constitutes the type of this species, is a native of the Cape of Good Hope.

Among the older definitions by which this shell was known among the early writers, we may mention that of the learned Kircher, whose museum of curiosities, extant in the beginning of the last century, contained a shell of this kind, which Bonanni thus describes:—“*Conchylium ea parte latius qua in turbinem desinit sine aculeis, et tuberculis, foramen non rotundum, ut in Purpura et Buccina, sed longum.*” *Musaei Kircheriani. classis iii. 10. 450.* et Bonan. 113.

It may not be amiss to observe, in conclusion, that amidst all the improvements which modern naturalists have made in the science of Conchology, **Voluta Scapha** still remains a **Volute** among the most approved writers of the present day, while most of those species considered by Linnæus as appertaining to the same genus are removed to other newly-constituted genera.

The character of the true **Volute**, as it is at present laid down, consists in the shell being of an oval form, more or less ventricose,

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or swollen, the summit obtuse and ending in a kind of papilla, or teat, the base of the shell cut off or somewhat truncated: without canal, and the pillar charged with plaits or folds, of which the inferior ones are the largest and longest. The precise contrary of this is observable in the new genus **MITRA**, of which *Voluta Episcopalis* is considered as the type. In this last mentioned shell, the body instead of being ventricose is subfusiform, the spire pointed at the summit, and the lower plaits upon the pillar smaller instead of larger. The contrast between these two tribes will, it is conceived, sufficiently illustrate the characteristic peculiarities of the genus **Volute**, as it is at present constituted.





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PLATE V.

TROCHILUS PELLA,

TOPAZ HUMMING-BIRD.

PICÆ.

GENERIC CHARACTER.

Bill subulate or awl-shaped; filiform, tubular at the tip and longer than the head; upper mandible forming a sheath for the lower. Tongue filiform, the two threads coalescing, and tubular feet formed for walking; tail composed of ten feathers, in general.

* Bill incurvate.

SPECIFIC CHARACTER

AND

SYNONYMS.

Red; middle tail feathers very long; body red; head brown; throat golden green; rump green.

PLATE V.

TROCHILUS PELLA : ruber rectricibus intermediis longissimis,
capite fusca, gula aurata uropygioque viridi.—
Linn. Syst. 1. p. 189. 2. Gmel. t. 1. p. 1.
485. 2.

TROCHILUS PELLA : curvirostris ruber, rectricibus intermediis
longissimis, corpore rubro, capite fusco, gula
aurata uropygioque viridi. *Lath. Orn. 1. p.*
302. 2.

Polytmus Surinamensis longicaudus ruber.—*Briss. 3. p. 690. 15.*
Falcinellus gutture viridi.—*Klein, Av. p. 108. 15.*
Le Colibri topaze.—*Buff. 6. p. 46.—Pl. Ent. 599.*
TOPAZ HUMMING-BIRD.—*Lath Syn. 2. p. 746. 2.*

There is not, throughout the very ample range of the creation which the feathered tribes present to our consideration, a race of beings more deservedly admired for their beauty than the Humming-Birds. Natives of the warmer climates of the globe: of countries where the fervour of a tropic sun calls forth the spontaneous productions of the earth bedecked in gaiety unexampled in other regions of the earth, these little beings seem to participate in all its genial influence. With forms the most pleasing for symmetry and elegance they combine a brilliancy of colours the most splendid; their golden hues, their sapphirine tints, the lustre of the emerald, the ruby, garnet, amethyst, and topaz, with which their plumage is adorned, is not surpassed in brightness by the valued gems whose

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hues they borrow, and whose splendours emulate ; as though, in this much-favoured race we beheld the richest gems of earth inspired with life, and endowed with powers of activity and will. The flowers whose nectareous juices afford them sustenance, are moreover the liveliest and most luxuriant among those that adorn the surface of the teeming earth :—in a word, the Humming-Birds, poised and fluttering upon the wing, or flitting from flower to flower, in search of food beneath the fervid illumination of a cloudless tropic sun, present a spectacle of the works of nature upon a scale of miniature the most pleasing and most brilliant.

Owing to the slender structure of the bill, the Humming-Birds have some difficulty in obtaining their support ; the luxuriant fruits of the tropic world afford them no repast : their bills are much too feeble to penetrate their rind to derive subsistence from their fluids. It is the rich juices of the flowers and not the fruits that afford them food ; the fluids which they find secreted in the nectaria of flowers, the nectaria of those plants in particular which have the flowers long and tubular, and in which those repositories of mellifluous fluid lie in the bottom of the corolla are the favourite objects of their resort. About the flowers of this kind the Humming-Birds are seen hovering like bees, and like those industrious creatures extracting at the same time those juices of the flowers by means of their elongated tongue. The construction of the tongue in this tribe of birds is singular and deserving of explicit mention ; it consists of two tubular filiform threads, which coalesce throughout their whole length, excepting at the tips, where they are divided, or bifid ; this organ, which is remarkable for its extreme length, it inserts deeply down into the corolla of the flowers, and is thus enabled to obtain the

PLATE V.

nectar nearly in the same manner as the insects of the sphinx genus. The Humming-Birds, when on the wing, are observed to emit a humming noise, like that of the bee, and it is apparently from this circumstance that this class of the feathered race have derived the appellation of Humming-Birds.

As the different species of the Humming-Bird, though uniformly small, vary much in magnitude, from the bigness indeed of the wren and others of our smaller warblers to a size more diminutive than several of the larger kinds of the bee tribe, the nests of these birds, as may be conceived, are found to vary materially according to the size of the species to which they appertain. These little local habitations of the infant brood are all comparatively small, are usually of a roundish form, lined with the softest downy leaves, and each in general contains two little eggs, scarcely exceeding the size of peas, and of a pure white colour without any spots.

The slenderness of the bill and weakness of the legs in this tribe of birds sufficiently demonstrate that they are inadequate to any contests with other kinds of the feathered race; they are nevertheless observed among themselves to be rather of a pugnaceous disposition. Their usual contests are for their mates or for the possession of some favourite flower, and are observed to take place while on the wing. Their mode of attack is by striking with violence against each other, for they never attempt to assault each other with their bill and their feet are much too small and feeble for conflict.

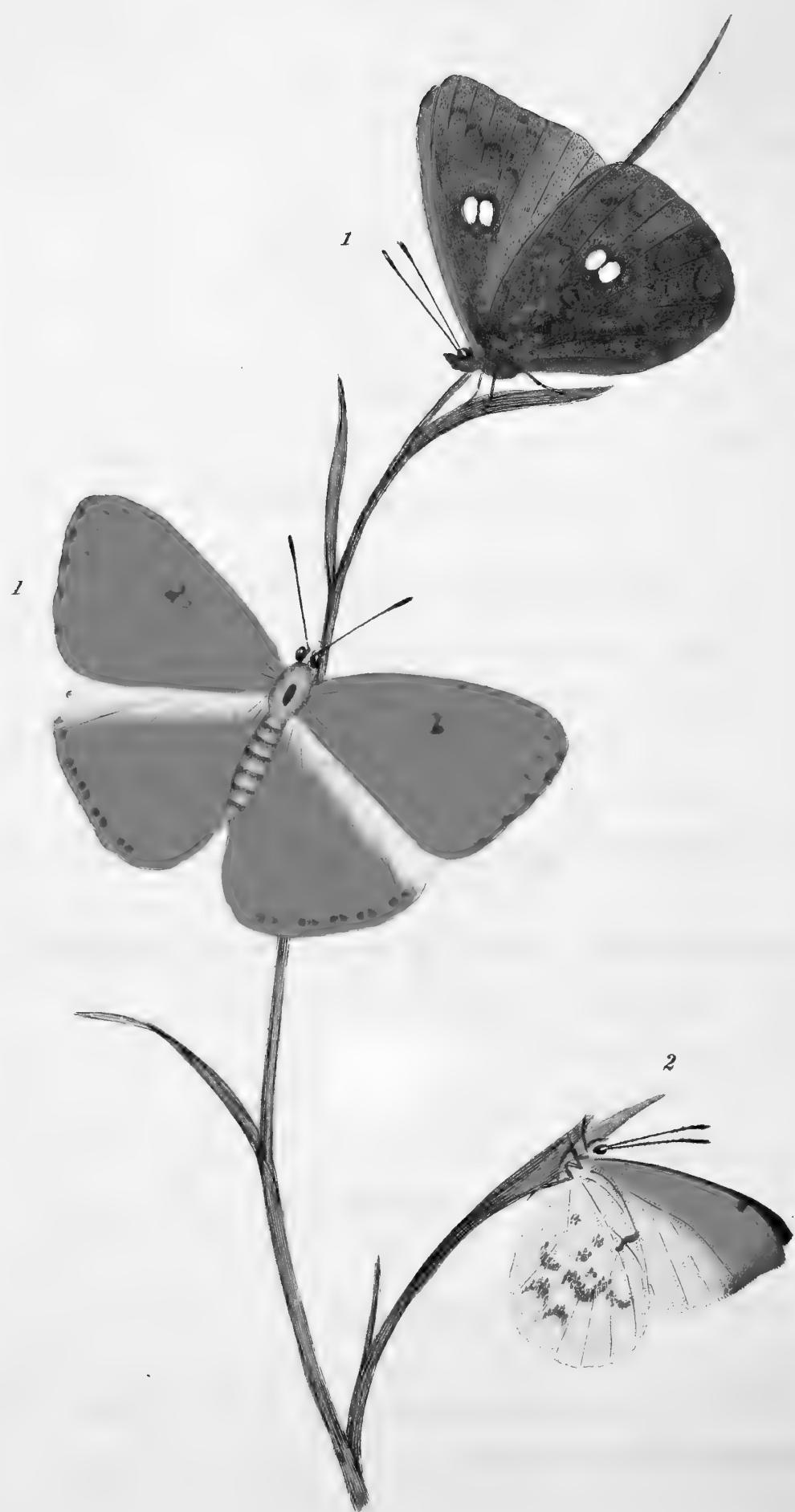
ORNITHOLOGY.

The species of Humming-Bird now before us is one of the larger kinds, its length being about six inches from the tip of the bill to the extremity of the tail, exclusive of the two elongated feathers which extend beyond the true tail about two inches; the bill is long, slender, and slightly incurvated, and of a whitish colour with the tip black. The most characteristic peculiarity is the large space of topazine or golden green immediately beneath the chin, and which expands over the whole surface of the throat. The head is blackish purple, and the same colour descending along the sides of the neck passes in a kind of crescent round the breast, thus constituting an abrupt separation between the vivid green space of the chin and throat, and the vivid lustre of the abdomen, which is a fine crimson or ruby colour from the breast nearly to the vent, where it becomes interspersed with a few white feathers; the feathers of the thigh are white also. The back and wing coverts are brown with tints and shades of greenish, and glosses of a golden yellow. The greater quill feathers are fuscous, the tail coverts are fine green; the tail orange, except the two remarkable elongated candal feathers, which are black. The legs pale.

Notwithstanding the very decisive character which this species of Humming-Bird displays, and which considered individually can leave us little reason to distrust its identity as a species, we are not to overlook the very near approximation of this kind with some others that are described as specifically different, such as the Sapphire Humming-Bird, and that distinguished by the appellation of the Sapphire and Emerald Humming-Bird. The near approach of these and some others to the species now before us appears to be sufficiently obvious to induce a persuasion that in a less mature state

PLATE V.

one kind may sometimes have been mistaken for another, and this becomes the more probable when we recollect that the Humming-Birds in general, like many of the larger tribes of the feathered race, do not arrive at their full perfection of plumage till the second and more commonly till the third year.



ENTOMOLOGY.

FIGURE I, I.

PAPILIO MARCELLINA.

MARCELLINA'S BUTTERFLY.

ORDER

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip and generally terminating in a knob: wings erect when at rest. Fly by day.

* DANAI CAND.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, rounded, yellow, each of them beneath with a geminous or double silver spot.

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PAPILIO MARCELLINA : alis integris rotundatis flavis : singulis
subtus puncto gemino argenteo.—*Fabr. Spec.*
Ins. 2. 49. n. 214.—Ent. Syst. t. 3. p. 1. 209.
654.—Cram. 14. t. 165.

Papilio Marcellina is a butterfly of peculiar simplicity and beauty in its general effect. The upper surface is of a fine yellow with a singular subocellate spot or stigma of a reddish brown in the centre of the anterior wings, and a series of double spots of the same colour, disposed towards the exterior margin both of the anterior and the posterior pair. The lower surface, as we perceive from the Butterfly at rest, with the wings erect in the upper part of the plate, is rather more of an orange or fulvous hue, and instead of having the disk immaculate like the upper surface, except the stigma in the anterior wings, are sprinkled with reddish brown. The centre of the wings, as well the posterior as the anterior pair, are marked with two silver spots, and which, from their near approximation, may be denominated, according to the language of Fabricius, a geminous or double spot of silver.

This elegant insect is figured from a specimen in the collection of the celebrated Dr. Hunter, the individual example described and referred to by Fabricius in his *Species Insectorum* and *Entomologia Systematica* as expressed among the synonyms above recited.

The Papilio Marcellina has appeared already in the costly work of Cramer, upon the Papiliones tribe, we are nevertheless induced to present a figure of the species to our readers, in order to point out the very close affinity that prevails between this insect and

PLATE VI.

another much more frequent species named *Papilio Sennæ*. This latter mentioned Butterfly is figured by Sloane, Merian, and Seba; *Papilio Marcellina* by Cramer only. These insects resemble each other, but are nevertheless distinct; the specific character of *Papilio Sennæ* consists chiefly, according to Linnaeus, in having the double spot in the centre of each wing of a ferruginous colour, while in *Papilio Marcellina* that characteristic mark has the exact appearance of two approximating spots of molten silver. The tips of the wings in *Papilio Sennæ* are sometimes spotted as in *Marcellina* and are sometimes destitute of spots.

Both these analogous species are natives of Surinam; Sloane describes *Papilio Sennæ*, in his *Natural History of Jamaica*, as an inhabitant of that island.

FIGURE II.

PAPILIO AGAVE.

AGAVE BUTTERFLY.

ORDER

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob; wings erect when at rest. Fly by day.

ENTOMOLOGY.

* DANAI CAND.

SPECIFIC CHARACTER

AND

SYNONYMS.

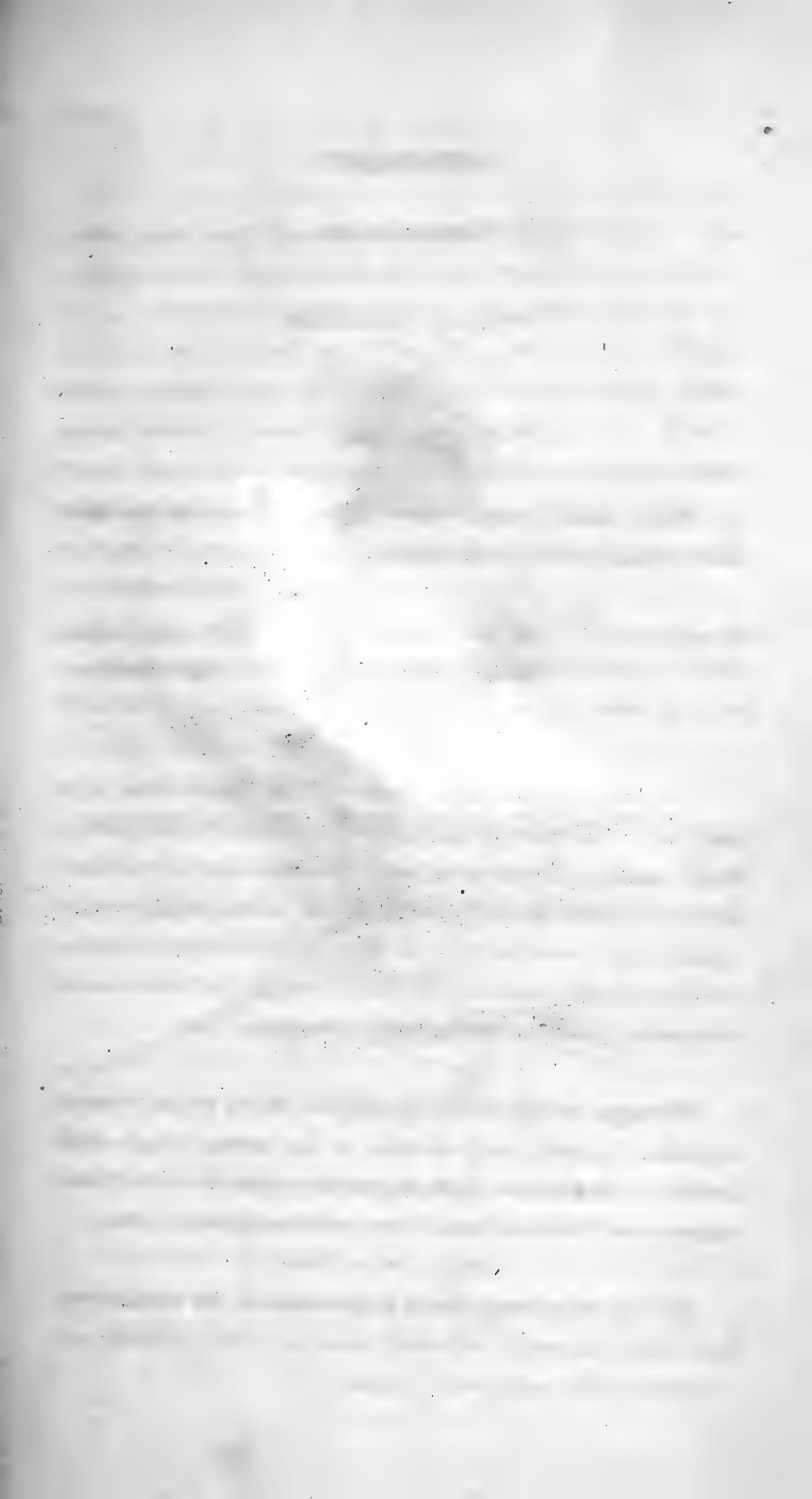
Wings entire rounded yellow; anterior pair at the tip black above, beneath sanguineous brown.

PAPILIO AGAVE: alis integerrimis rotundatis flavis: anticis apice supra nigris, subtus brunneis.—*Fabr. Ent. Syst. t. 3. p. 1. 193. n. 599.*

This very scarce and pretty species of the Papilio tribe is an inhabitant of Cayenne, and may possibly occur also in other parts of South America. It was unknown to Fabricius when he published the work entitled *Species Insectorum*; he afterwards observed a species of it in the cabinet of Von Rohr, and inserted a description of it between the two species *P. Hecabe* and *P. Cardamines* in his subsequent production *Entomologia Systematica*.

The upper surface of this Butterfly is entirely yellow, without any marks, excepting only the apex of the anterior wings, which are black in that portion of the tip which appears red on the lower surface, or as Fabricius terms it, somewhat erroneously brown.

This fly, so uniformly simple in the aspect of its superior surface, appears to peculiar advantage when in a resting position as it is depicted in the lower part of the plate.





ORNITHOLOGY.

PLATE VII.

EMBERIZA CIRIS

PAINTED BUNTING.

ORDER

PASSERES.

GENERIC CHARACTER.

Bill conic: mandibles receding from each other from the base downwards, the lower with the sides narrowed in; a hard knob within the upper mandible.

SPECIFIC CHARACTER

AND

SYNONYMS.

Head blue, abdomen fulvous, back green, feathers green brown.

G

PLATE VII.

EMBERIZA CIRIS: capite cæruleo, abdomine fulvo, dorso-viridi,
pennis viridi-fuscis *Act. Stockh.* 1750 *p.* 278
t. 7. *f.* 1.—*Linn. Syst. Nat.* 1. 179.—*Gmel. Syst.* 1. *p.* 885.

Fringilla Tricolor, *Catesby Car.* 1. *p.* 44. *t.* 44.

Klein. Av. *p.* 97. 7.

Chloris ludoviciana, Papa, *Briss. 3. p.* 200. 58. *t.* 8. *f.* 3.

Fringilla Mariposa, *Scop. Ann. 1. No.* 222.

Le Pepe *Buff. 4. p.* 176. *t.* 9.—*Pl. Enl.* 129. *f.* 1.

China Bulfinch, *Albin. 3. t.* 68.

PAINTED BUNTING, *Lath. Gen. Syn. 3. p.* 206. 54.—*Supp. p.* 159.

Ind. Orn. T. 1. p. 416. 61.

The varieties of the very beautiful species now before us are rather numerous, as may be imagined from its moulting twice in a year, and not arriving, as it is pretty generally believed, at its full state of plumage till nearly the third year. These are the progressive changes of the male bird, and it may be also added, that the female undergoes several mutations of the same kind, as well as the male bird.

When its plumage has attained its full perfection, there are few birds of more striking beauty than the male of this species. Its size is scarcely inferior to that of our common Hedge Sparrow, the length between five and six inches. The head and neck of a fine blue purple, with a circle of red round the eyes. The whole of the underside, including the chin, throat, breast, and abdomen, is a

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fulvous, or rather a vivid scarlet ; the back green, below which is a space of yellow, and the rump scarlet, like the abdomen. The wings are greenish, being shaded with brown, and having the edges of the feathers of a delicate green : the greater wing coverts in our specimen are of a pale rose colour, and which in the general conformation of the plumage constitutes a roseate band across the wings. The tail, like the wings, are brownish, having the edges of each feather green ; the bill and legs dark.

In some of the varieties of this bird, occasioned as before observed, through the moult of the feathers, the blue purple of the head and neck is more generally extended along the back, and sometimes appears in patches upon other parts of the plumage. Sometimes, also, the dark spots that appear upon the scarlet space of the chin, throat, breast, and abdomen, are more diffused, and in other states of moult the abdomen becomes yellow or yellowish. The abdomen has also, in some instances, been known to change white, leaving only a rounded spot of red upon the breast.

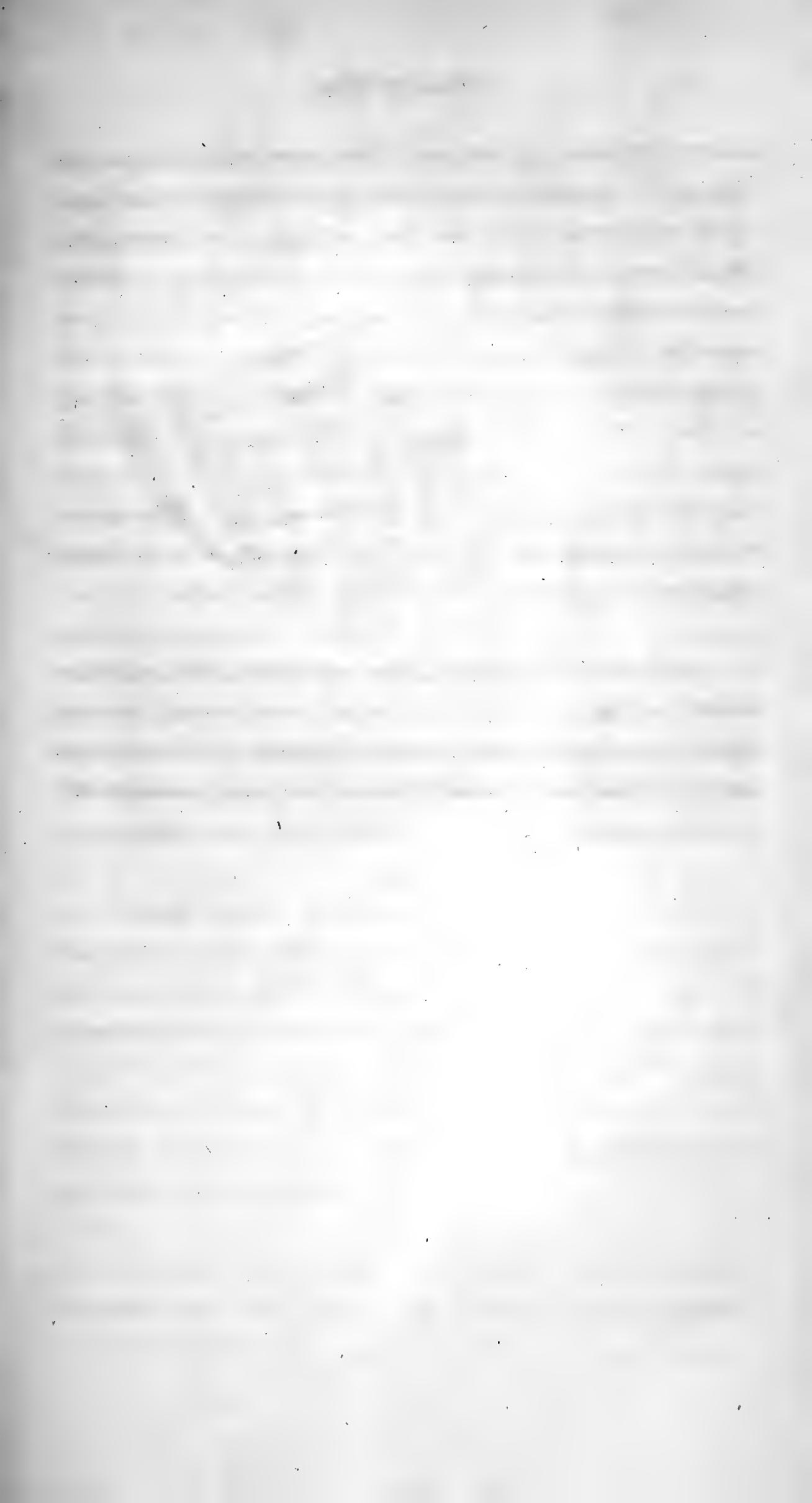
Catesby describes this species as a native of Carolina. It is an inhabitant of all the warmer parts of America, extending from Mexico and Peru, as far as Canada, in the milder seasons of the year. It is rather a hardy bird, insomuch, that some attempts have been made by the Dutch to naturalize the species in Europe, like the Canary ; but not, however, with the same success, although they may be kept alive for some time after being brought into the less genial climates of the Continent of Europe.

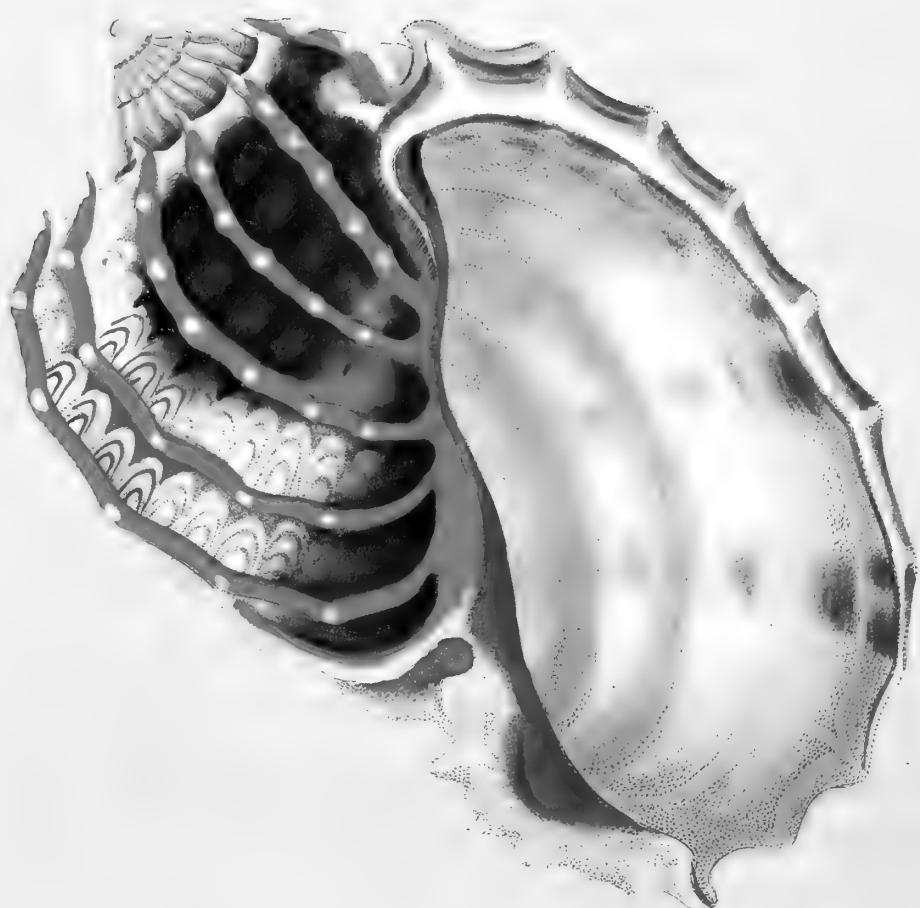
The celebrated Marmaduke Tunstall, Esq. a most indefatigable Naturalist, who lived towards the latter part of the preceding

PLATE VII.

century, has stated, that two pair of these birds made their nests and laid eggs in the orange trees of a Menagery at Holderness, in Yorkshire, but observes at the same time, the eggs were unproductive. Mr. Tunstall, as a Collector, was the great rival of Sir Ashton Lever, and of authority unquestionable, and this circumstance tends to shew that it might be yet possible to rear these very beautiful birds in this country. Some authors have presumed upon the authority of Albin, that this species extends to China. There can be very little doubt that the figure in the third volume of Albin's plate, denominated the China Bulfinch, is intended for this bird. Albin assures us that he saw the bird he figured in the possession of a curious gentlemen, who told him he had received it from China.

In the warmer parts of America, which these birds, as before observed, inhabit, they occur sometimes in vast flocks ; it does not appear that they are of a shy or timid disposition, yet it is said they are seldom seen near habitable places, and never in any considerable numbers together.





CONCHOLOGY.

PLATE VIII.

BUCCINUM HARPA

var TESTUDO

TORTOISESHELL HARP BUCCINUM.

UNIVALVE.

GENERIC CHARACTER.

Shell spiral, gibbous: aperture ovate, (generally) terminating in a short canal, leaning to the right, with a retuse beak or projection: pillar lip expanded.

* *Detrita*, pillar lip apparently worn flat.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell with equal longitudinal and distinct mucronate ribs: pillar lip smooth.

PLATE VIII.

BUCCINUM HARPA : testa costis æquilibus longitudinalibus distinctis
mucronatis, columella lævigata. *Linn. Syst. Nat. 10. p. 7. 38. n. 400.—Mus. Lud. Utr. 609. n. 261.*

BUCCINUM HARPA : testa varicibus* æqualibus longitudinalibus
distinctis mucronatis : columella lævigata. *Gmel. Linn. Syst. Nat. T. 1. p. 6. 3482. n. 47.*

BUCCINUM TESTUDO. *Soland. MSS.*

HARPA. *Rumpf. Must. 32. f. K. L. M.*

HARPA NOBILIS *Argenv. Conch. t. 17. f. D.*

This superb shell, admitted to be the finest example of its kind, at present known, once constituted part of the Conchological Collection of Sir Ashton Lever ; and continued to be a distinguished ornament of that Museum after it passed into the hands of Mr. Parkinson. At the dissolution of that Museum, which took place in the month of May, June, and the beginning of July, in the year 1806,

* “*Testa varicibus æqualibus longitudinalibus, &c.*” is an incorrect reading of Professor Gmelin. If we examine the Linnaean description of the Museum of the Queen of Sweden, *Mus. Lud. Utr.* to which Gmelin refers, we shall find it to be as might be naturally expected, “*testa costis æqualibus;*” for it is the ribs, and not for veins that Linnaeus intended. Linnaeus refers to the 10th edition of his *Systema Naturæ*, which is not mentioned by Gmelin, and here we again meet with the same reading “*testa costis æqualibus, &c.*” We have been the more explicit in pointing out this error, because we observe that one Conchologist, not long since, in the absence, doubtlessly, of the moment, has translated literally the Gmelinian text in describing *Buccinum Harpa*.

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the specimen became the property of a very celebrated amateur, the late Mr. Jennings: he purchased it at the sale for the sum of seven pounds.* Mr. Jennings is since dead, and his collection being, like the former, dispersed by public sale: we are no longer certain in whose possession this very beautiful rarity now remains.

Besides that this shell excels in magnitude every other known example of its kind, the formation of the shell itself is extremely fine, its perfection exquisite, the colouring of the richest and most decided hues, and the marks and lines throughout, which so eminently characterize the shell, definitely distinct; we shall dwell no further on the peculiar beauty of this shell, from a persuasion that the drawing will be found so explicit and so satisfactory, as to render a minute description needless: it was taken with peculiar care, by permission of its proprietor, while it remained in the Leverian Museum, and will not, we are convinced, be found defective in point of accuracy, upon the most attentive comparison with the original, should that ever be produced in competition with it.

In the Linnæan arrangement of Conchology, the shells of this kind constitute a species of the Genus *Buccinum*, the *Buccinum Harpa* of that author. Previous to the time of Linnæus, the best Conchologists had considered those particular shells that possess the essential characters of the Common Harp Shell, as a distinct genus. Rumphius so adopts it under the name of *Harpa*; and Argenville subsequently regarding that particular kind called *Buccinum Harpa*, by Linnæus, as the type of the genus, denominates it, by way of eminence, *Harpa Nobilis*. By some inconceivable error it has been

* Lot 75 of the 60th day. July 2nd, 1806.

PLATE VIII.

asserted that Lamark was the first author who separated the family of Harps from the genus *Buccinum* ; this is evidently a mistake, as we perceive from Rumphius and Argenville, and as we are now proceeding to shew from the “*Catalogue Systématique et Raisonné*,” of the once celebrated cabinet of M. de Davilla; besides which, some others might be added, were it material to notice them.

As we have introduced the subject of Davilla’s Cabinet, it will, perhaps, afford some pleasure to many of our readers if we mention a few of those very beautiful varieties of this natural family of the Harps, which were once concentrated in that costly collection. These, collectively, appear to have presented a series of the most choice and interesting of the varieties at that time known. The distinctions are taken from the number of the prominent ridges with which these shells are longitudinally traversed, and these, it hence appears, varied from thirteen to fourteen and fifteen in number. One of these, a very fine shell, and deemed the type of the *Harpe* tribe, was the *Harpa Nobilis* of D’Argenville : it had fifteen ribs, was very regularly marked with alternate zic-zac lines of brown and white, or rather of brown lines disposed upon a white ground, with a small intermediate incurvate line of grey traversing the middle of each of the white lines, in the same direction as those of brown ; a disposition of marking, very similar to the zic-zac lineations upon the shell represented in the annexed plate. There were two other Harps, in which the number of ribs, or ridges, amounted to no more than fourteen, so that the sides were larger; and they were also more inclined than in the preceding. These were marbled, and marked with streaks and dashes of rose colour, yellow, white, and chesnut, a large intermediate and rather deeper coloured zone, or band, passed round the middle of the shell, and two large spots of brown appeared

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on the under surface of the shell. There were yet two other Harps, which differed in their colours and markings from the preceding ; one of these had only twelve ribs, or ridges, the other thirteen. The colours in one of these were paler, in the other the zic-zac lines, were more contiguous, or placed closer, and the longitudinal striæ less distinct or prominent. And besides these, there were several others, all which differed in some peculiarities of inferior moment, principally in the paleness or intensity of their colours, and variations in the disposition of the dark and paler spaces with which the shells were marbled.

The above series of Davila presents us with a pretty ample elucidation of the presumed varieties of that beautiful species the Linnæan *Buccinum Harpa*. We say, only the presumed varieties, because in the present state of the Conchological Science there appears to be a very strong propensity among collectors to increase the number of the species, by considering every trivial variation, or accidental circumstance in the growth of shells, as so many characteristic indications of new species ; a disposition that the best Conchologists cannot but disapprove. Experience teaches us that there is no class of beings in the creation, in which nature is more sportive, than the testaceous tribes ; none in which a greater caution is required in the precise determination of what are species and what varieties only : and among other local causes the influence of climates in different regions are not the least powerful in producing those variations. With the best experience, and the advantage of many years assiduous application, the Conchologist may be sometimes in doubt, and hence it is not likely that a slight acquaintance, only, with the subject will be found sufficient to enable him to pronounce with definitive satisfaction the exact distinction between approximating species and the

PLATE VIII.

sportive varieties into which they sometimes divaricate. These remarks cannot be more forcibly exemplified than in the series of the presumed varieties of the *Buccinum Harpa*. Some of these are indeed so very dissimilar as to justify a persuasion that they may be specifically distinct, and yet again, these are blended so intimately with others, which are confessedly varieties, that it demands the utmost caution in pronouncing which are species, and which varieties or transitions only. This is the impression under which the best informed Conchologists have ever ventured to define the shells which constitute the natural family of the Harps, and may serve to afford us a sufficient explanation of the causes of those differences in opinion which so manifestly prevail among them.

It may not be very generally known, excepting only among Naturalists, that the late Dr. Solander had devoted much attention to this intricate science : his arrangement of shells was designed as an amendment upon that of Linnæus. This arrangement was never made public ; it remained in manuscript in the library of the late Sir Joseph Banks. From a perusal of these MSS. it appears that Dr. Solander had conceived the necessity of a new disposition of the shells comprised in general as varieties of this species. Some he allows to remain varieties, while others constitute, in his ideas, species nearly analogous, but nevertheless distinct. He does not propose the formation of an independant genus of the Harp family, nor the removal of those shells from the genus *Buccinum*, in which Linnæus places the species *Harpa* : he proposes only to assemble together the least equivocal varieties of that shell, together with that which he considers as the type of the Linnæan species, the true *Harpa Nobilis* of preceding authors ; and to allow the others to remain as species distinct from the Linnæan shell. It will be hence perceived that

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Dr. Solander's constitutes several distinct species among the number of those Harps, which other writers, and Gmelin among the rest, regard as varieties only of the common kind. In the manuscripts of Dr. Solander the very beautiful Harp shell now before us stands as a distinct species from *Buccinum Harpa*, under the name of *Buccinum testudo*. Some of the French Naturalists have called it *Harpa testudinaria* : it was placed under that name, and its synonymous appellation *L'ecaille de Tortue* in the once celebrated Museum of Mons. de Colonne, the French Minister of State, under Louis the XVI : the definitive English name of Tortoiseshell Harp was assigned to it by Mr. George Humphrey, and from his known authority in the study of shells, this variety has been since distinguished among collectors in our country by that appropriate appellation. All these names, it will be scarcely necessary to add, are devised in allusion to that resemblance which its peculiarly beautiful variegations of colour are conceived to bear, to those of tortoiseshell, when transparent and exposed to light.

We have been at some pains in our endeavours to reconcile our mind to the idea of introducing this Tortoiseshell Harp as a species distinct from the *Buccinum Harpa*, in conformity with the opinion of Dr. Solander. We have compared our shell with the acknowledged type of the Linnæan species, with every attention, and are compelled, in truth, to allow, that however distinct it may appear upon the first glance of inspection, we cannot implicitly accede to the persuasion of its being specifically distinct. Placing this remarkable variety with that particular shell, the true *Buccinum Harpa*, the less informed Conchologist would assume as certain that the difference existing between the two removed them sufficiently from each other. Arrange these, however, with those varieties and transitions of the Common

PLATE VIII.

Harp that approach the nearest in appearance to both kinds, and we shall then perceive such a close analogy, such an intermediate catenation, as will induce a pause, and certainly under the impression with which we view them, an idea that these variations arise only from local causes, and are not specifical distinctions. As a marked and well distinguished variety we have retained the term *testudo*, which Dr. Solander had assigned to it ; but as a distinctive appellation of it as a variety, and not as a shell altogether distinct.

That it may not be imagined we feel any disposition to object against those changes in the Science of Conchology, which the more advanced state of our present knowledge may demand, we have no hesitation in adding that in our own opinion the *Harpa* family should constitute a very distinct tribe from the other Buccini ; we believe, also, that had Linnaeus lived to reconsider them, he would have comprehended them together as a genus. The French writers have long since done so. De Monfort advances that Lamark was the first who separated the Harps from the Linnaean Buccinum. This we have already shewn to be an error. Lamark's example in proposing them as a genus in his *Systemé des Animaux sans Vertébrés*, published in the year 1801, and his subsequent observations in other writings, has tended to establish them as a genus ; he was not its first proposer.

It may not be amiss, in conclusion, to observe, that Lamark has taken for the type of his genus, the variety figured by Lister, in his Conchology, *tab. 992 f. 55*, the shell which he denominates *Harpa Ventricosa*. The leading character of his genus consists in the shell being of an oval form, ventricose or swollen, and having the surface furnished or beset with longitudinal, parallel, and sharp or acutely

CONCHOLOGY.

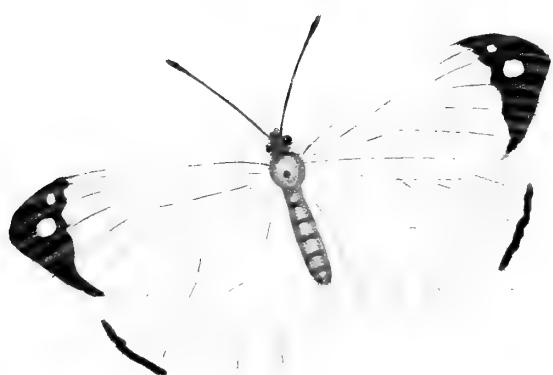
edged ribs. The opening or mouth, oblong, ample, abbreviated or cut off below, and without canal. The pillar, or inner lip, smooth, or without plaits or tubercles, and terminating in a point at the base. The absence of a canal is one material character by which the *Harpa* genus, as thus laid down, is to be distinguished from the new genus *Trophon*, to which, in some respects, at least, it bears a general resemblance. The definition of the genus by De Montfort is rather different from that of Lamark: according to De Montfort the shells of this family are globose; the first whorl very far surpassing the rest in size, and the spire obtuse. The mouth is very open. The pillar or inner lip smooth and rounded. The outer lip bordered by an acutely edged rib or ridge, running parallel to those with which the shell is traversed externally, and the base cut off. The spire in the true *Harpa*, according to this writer, forms a kind of little domes, one surmounting the other, and the spire, instead of ending in an acute point, terminates in a small mammillated knob.

All the known varieties of this natural family are inhabitants of the deep waters of the sea, and the animal inhabitants appear to have remained hitherto undescribed. They are confined chiefly to the Indian Seas. The variety known by the name of *Nobilis* is a native of Japan; there is another found in China, distinguished by the name of *Chinensis*: both these are considered by Dr. Solander as the *Buccinum Harpa* of Linnæus: there is one kind found at Ceylon, and another at Madagascar, which are to be esteemed distinct species. The sanguineous *Harp*, from the Coast of Guinea, is the *Buccinum pandura* of Solander. The *Harp*, distinguished by having a far greater number of elevated ribs than any of the preceding, is from the seas of the Phillipine Isles, and is certainly a distinct species. The

PLATE VIII.

very fine variety which constitutes the more immediate object of our present illustration, the Tortoiseshell Harp, is a native of Madagascar: its length is four inches, and its greatest breadth two inches and a half.





ENTOMOLOGY.

PLATE IX.

PAPILIO PSAMATHE.

PSAMATHE BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ elevated or thicker towards the tip, and generally terminating in a knob. Wings erect when at rest. Fly by day.

* *Danai* Cand.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings entire, white; tip of the anterior pair black spotted with white, lower ones beneath greenish with two darker bands, the anterior one incurvate.

ENTOMOLOGY.

PAPILIO PSAMATHE: alis rotundatis integerrimis albis: anticis apice nigris albo maculatis: posticis subtus virescentibus; fasciis duabus obscurioribus; anteriore incurva. *Fabr. Spec. Ins. T. 3. p. 1. 207.*

A native of America and nearly allied to *Papilio Phronima*, represented in plate 153 of the work of Cramer. It differs in having only the tip, and not both the base and tip, black, as in *Phromina*. Our present species is also distinguished further by having two white spots on the black tip of the anterior wings, in the apex of the anterior wings being destitute of any black spot beneath, and in the anterior band on the lower wings beneath being incurvate.

This species has not been represented by any author. Fabricius described it from the drawings of the late Mr. Jones, and it is from that matchless series of designs and MSS. that the present figures are copied.



112. *As the Act directs.* by E. Donoven. & Messrs Simpkins & Marshall, July 1, 1822.

ORNITHOLOGY.

PLATE X.

FRINGILLA BENGALUS

BLUE BELLIED FINCH.

ORDER

PASSERES.

GENERIC CHARACTER.

Bill conic, straight and pointed.

SPECIFIC CHARACTER

AND

SYNONYMS.

Pale blue; head and back grey: sides of the head purple.

FRINGILLA BENGALUS: dilute cærulea, capite dorsoque griseis,
lateribus capitis purpureis. *Gmel. Linn. Syst.*
Nat. 1. p. 920.

PLATE X.

FRINGILLA BENGHALUS: *Linn. Syst. Nat. 1. p. 323. 32.* (mas.)

FRINGILLA ANGOLENSIS: *Linn. Syst. Nat. 1. p. 323. 31.* (fem.)

FRINGILLA BENGHALUS: dilute cærulea, capite dorsoque griseis,
lateribus capitis purpureis. *Lath. Ind. Orn. 2.*
p. 461. 91.—Lath. Syn. 111. p. 310. 81.

Le Bengali. *Briss. Orn. 111. p. 303. 60. pl. 10. f. 1.—Buff. Ois. iv.*
p. 92.—Pl. Enl. 115. f. 1.

Blue Bellied Finch. *Edw pl. 131.* (female)

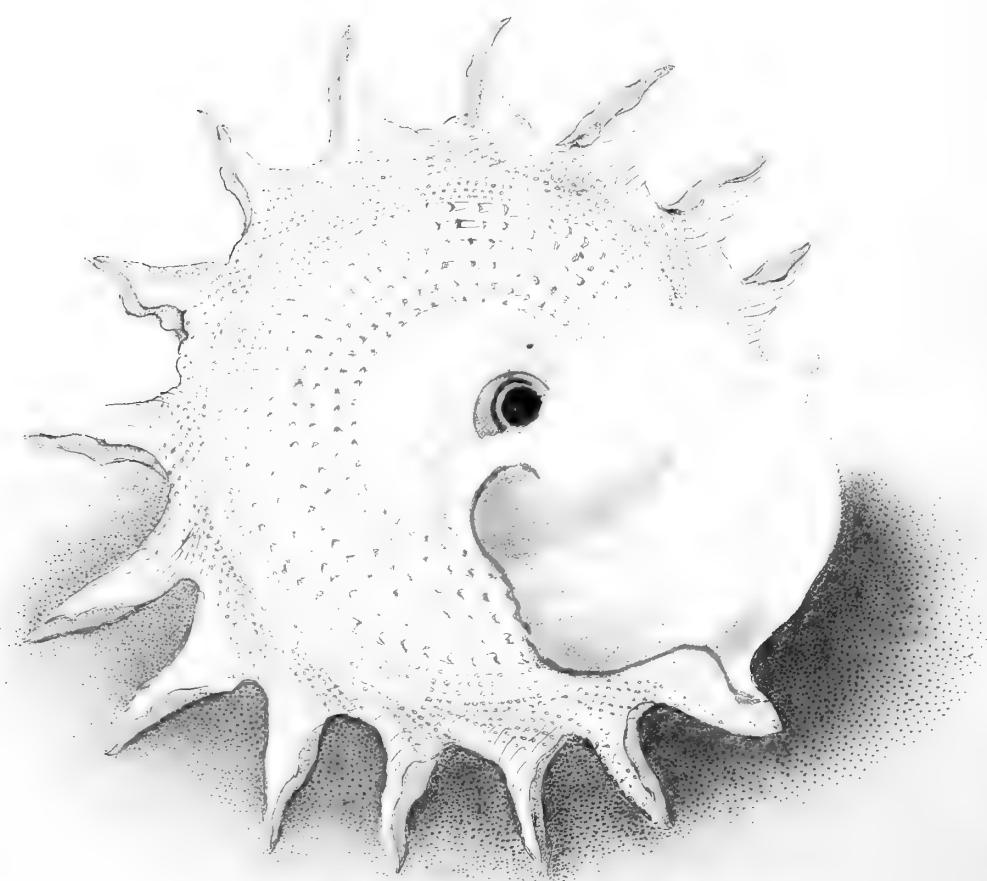
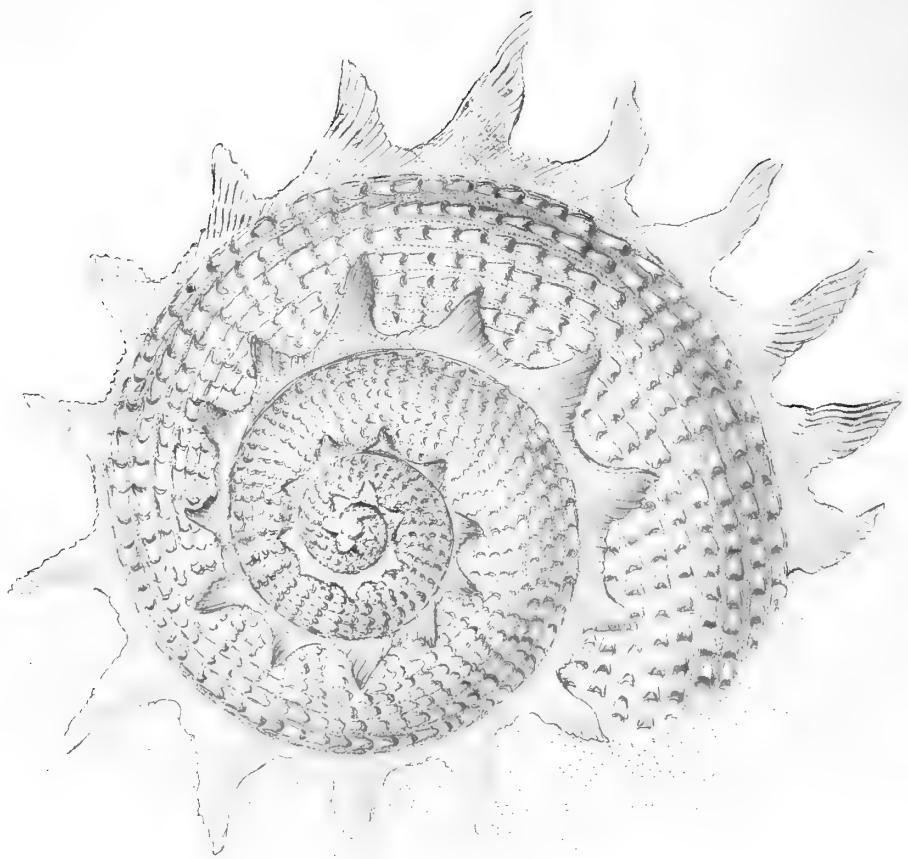
A pretty species of the Fringilla tribe, about the size of our smaller Linnets. The bill and legs of this bird are of a pale flesh colour: the body above, together with the wings, of a greyish brown: the lower part of the back, rump, and whole of the underside, of a delicate azure blue; the tail blue, of a somewhat deeper tint, and rather cuneated or wedge-formed. This is the general appearance of the plumage in both sexes, excepting, only, that the colours are usually somewhat brighter in the male than the female bird; and that the male bird is distinguished further by having a dark red spot on each side of the head, beneath the eyes, a character altogether wanting in the female.

It should be observed that these birds vary occasionally in the colours of their plumage, particularly in the cærulean tints of the under surface, which sometimes inclines to a pale rufous grey, or to blue intermixed with rufous grey; and in some instances when the

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state of plumage is less mature, the latter colour predominates so entirely on the lower surface, that only a transition tint of the azure appears upon the breast and abdomen.

Linnæus was induced to imagine that the two sexes of this bird were distinct species, the male he denominated *Fringilla Bengalus*, the female *Fringilla Angolensis*; the male bird, which he happened to describe, having been received from Bengal, the female from Angola. The truth is, that this widely diffused species inhabits both these places in common, with many others in Asia and Africa: in Angola, in particular, they appear to be very common.



London. Published, as the Act directs, by E. Donovan, July 1, 1822.

CONCHOLOGY.

PLATE XI.

TROCHUS IMPERIALIS

var α ROSEUS

PINK, OR ROSEATE, IMPERIAL SUN TROCHUS.

UNIVALVE.

GENERIC CHARACTER.

Shell spiral, more or less conic: aperture sub angular, or rounded, the upper side transverse and contracted: pillar placed obliquely.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell conic, olive, covered with rows of arched violet scales: whorls inflated, with a spinous radiate margin: perforation funnel-shaped and white.

* Variety, pink or rose-coloured.

PLATE XI.

TROCHUS IMPERIALIS : testa conica olivacea, squamis violaceis
seriatis fornicatis tecta : anfractibus inflatis mar-
gine spinoso radiatis, umbilico infundibuliformi
albo. *Gmel. Linn. Syst. Nat. 3576. 63.*—Var
OLIVACEUS.

TROCHUS IMPERATOR *Chemn. T. 5. 173. 174.*—Var OLIVACEUS
a PINK SUN **TROCHUS** *Lev. Mus.*

We cannot for a moment hesitate to believe that in announcing to our readers the introduction of the Pink, or Roseate Imperial Sun Trochus : the significant appellation under which the present rarity has been for many years distinguished, we shall awaken the attention of every Conchologist and amateur of the science. The shell so named, formerly constituted an object, no less conspicuous than beautiful, among the Conchological productions treasured together in the once celebrated Leverian Museum. And, as we possessed, through the immediate favour of the proprietor of that Museum, John Parkinson, Esq. an unreserved access to every article in the Museum, for the purpose of delineating the figures, or taking the descriptions of whatever we conceived worthy of such observation, it will be naturally imagined the Pink, or Roseate Imperial Sun Trochus, would be esteemed of too much importance to escape our very particular attention. The dispersion of that once celebrated Repository of Natural History has long since removed, and probably for ever, this exquisite rarity from the eye of public curiosity ; nor indeed is its present destination correctly known ; a circumstance, it is presumed, that cannot fail to enhance the value of a drawing,

CONCHOLOGY.

which we have every reason for believing to be the only memorial of this kind the pencil of the Arts have consecrated to the commemoration of the shell: the only figure, we are assured, the proprietor ever permitted to be taken from it.—Having premised so far, it will not be deemed superfluous to add, that the outline of the specimen is precisely a fac-simile of the shell itself, having been traced round its contour while lying upon the paper, and being afterwards finished in colours upon the outlines so struck, with every attention an object so estimable was presumed to merit.

The history of this curious variety of the Imperial Sun 'Trochus' is altogether interesting, and deserves explicit mention; it is one among the number of those rare shells which were discovered by that distinguished navigator, Captain Cook, in his voyage round the world. It was fished up in the Straits that divide the Island of New Zealand, now distinguished after him, by the appellation of Cook's Straits. Upon the return of Captain Cook to England, he presented Sir Ashton Lever, among other articles of great curiosity, with this particular shell, the only one of its kind he had found. The Imperial Sun Trochus, of an olivaceous violet hue, the shell which constitutes the type of this species, though very scarce, occurred occasionally, but this Pink variety only in the solitary instance before adverted to: it was drawn up, adhering to the cable of the ship, from the depth, as it appeared, of sixty fathoms water.*

* This article is thus described in the last day's sale, lot 81, "An elegant and unique pink variety of the imperial sun, drawn up with the anchor of a ship, from the depth of sixty fathoms, in Cook's Straits, New Zealand." Sold for £24 3s.

PLATE XI.

In the general computation of the value of the various articles in the Museum of the late Sir Ashton Lever, submitted to government, previous to the grant of the Lottery which transferred the possession of that Museum from its original founder to the hands of Mr. Parkinson, this shell was estimated at the value of *one hundred guineas*: and as this valuation was arbitrary, that sum was considered as the worth of the shell while it remained in the Museum. At the final dissolution of this Museum, which took place in the months of May, June, and July of the year 1806, this shell, like the rest, was submitted to the chance of taste or caprice: it was sold on the last day of the sale, for the sum of twenty three guineas, an amount considerably below its former valuation, but sufficient, nevertheless, to shew that its attractions were still great in the mind of the connoisseur.

The purchaser of this shell was at that time unknown, subsequently, however, the specimen appeared among the property sold at the residence of the Duke de Bourbon, immediately after the departure of that nobleman for France, in the beginning of the year 1815.* Dr. Leach has since that time informed us that he had given instructions for the purchase of this shell for the British Museum: the shell does not, however, appear in that collection, and the lamented illness of our ingenious friend, is likely, for the present, to preclude all further inquiry respecting its final destination.

It does not appear that this very curious variety of the Imperial Sun Trochus is known in any of the continental cabinets: the olivaceous kind, which as before observed, is to be regarded as the

* In Orchard-street, Portman-square, Thursday, April 13th, 1815.
Vide lot 84.

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type of the species, though esteemed scarce, is to be found in every continental cabinet of importance. Indeed, the olive kind maintained a very high reputation and price for many years after the time of Captain Cook, who brought several of them to England; from whence those continental cabinets were, in the first instances, supplied. Since that time the same seas have been attentively explored by Admiral Bligh, in the ships of his Majesty under his command; and through his researches, this shell, which was once considered of such unusual rarity, has become rather more common. The Pink, or Roseate variety, the immediate object of our present illustration, has hitherto, however, escaped all research, and it still remains as it was esteemed originally, after a lapse of nearly fifty years, not merely scarce, but perfectly unique.

An ingenious French writer of the present day, Denys de Montfort, in describing the olivaceous kind, the type, as before remarked, of the present species, has paid an appropriate tribute of applause to the memory of its original discoverers. "It is," says he, "to the Voyages of the celebrated Captain Cook, and to the researches of the indefatigable Naturalists who accompanied him, that we owe the knowledge of this fine and magnificent shell." "This shell," he adds, "appears to be exposed to such a swarm of aggressors, that his Mollusca (or animal) must lead a life of activity and war: his shelly covering is ploughed, or furrowed, and pierced by a host of enemies, and he must necessarily employ almost the whole of life in repressing their attacks, and in constantly repairing the breaches and perforations they occasion, by the exudation of the nacreous molecules, or fluid, with which nature has furnished him, in order to preserve the inner coating of his shelly habitation entire." Such is really the appearance of this shell in general; we have seen it so completely

PLATE XI.

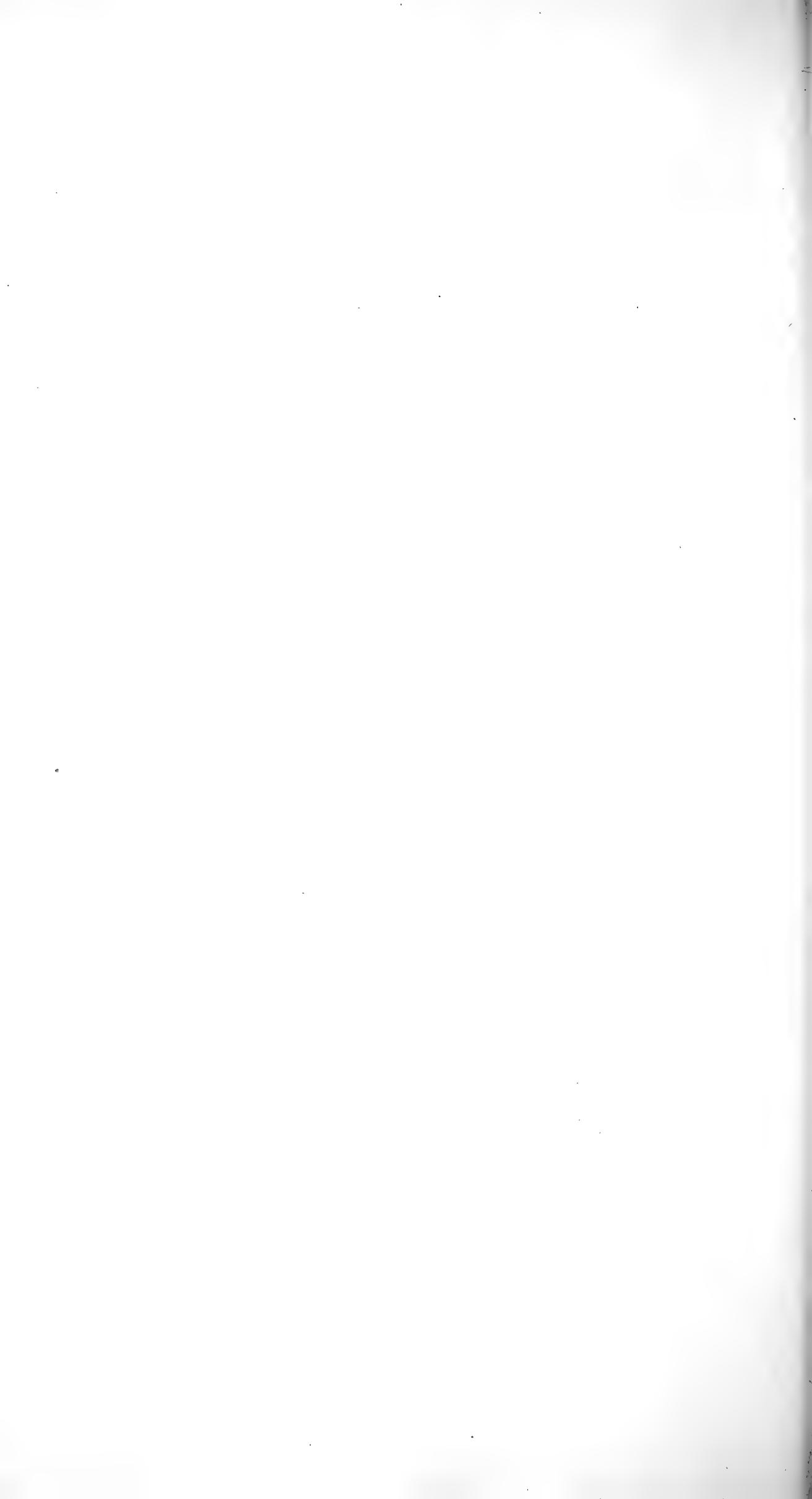
despoiled of its exterior coating by these attacks, as to render it impossible to form any tolerable conception of the shell when perfect; even an approach towards perfection in its outer coating is very rare. The most complete of its kind in the collection of the late Admiral Bligh, and probably selected as the best he ever met with, was perfect in this respect than might be expected. By one of those rare chances which sometimes happen, the Roseate variety, which forms the subject of our present illustration, had entirely escaped every accident of this nature, insomuch, that its figure may be regarded as that of a very perfect shell.

The earliest figures of the common, or olivaceous kind, occurs in the work of Chemnitz, and among the plates of Martin. Gmelin quotes the former, and describes the shell under the name of *Trochus Imperialis*. It is truly a *Trochus* of the Linnæan classification, but not, it appears, of any later writer, excepting those of the Linnæan school. Sometimes it has been generically classed as a species of **SOLARIUM**, a name assigned by Lamarck to the *Trochi* possessing the character of the Linnæan *Trochus Perspectivus*, and which he renders into his own language as a generical epithet, by the name *Cadran* (Sun dial). To accord exactly with the genus **Solarium**, as laid down by Lamarck himself, the general figure of the shell should be that of a depressed cone, having at the base an umbilical opening, crenulated upon the inner edge of all the spires; as may be perceived in looking down the umbilical opening of *Trochus perspectivus*; and finally, the opening of the mouth should be almost quadrangular. This is the character of **SOLARIUM**, as proposed by Lamarck, and which does not agree exactly with the shell before us.* Denys de

* *Système des animaux sans vertèbres*, p. 86.

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Montfort constitutes another genus of this shell, which he denominates **IMPERATOR** (*Conchyliologie Systematique T. 2. p. 199*) in the French, **L'EMPEREUR**. The olivaceous kind he calls Imperator aureolatus, l'Empereur couronné. The character of this new genus, Imperator, consists in the shell having a regular spire: in being imbricated, or covered with scales, like tiling upon the roof of a house: the carina of the whorls armed; the armament, for example, in the shell before us, consisting of a kind of frieze or curled foliage-like plates which succeed each other with great regularity: it has an umbilicus, which, in the present shell is large and deep; the mouth of the shell angular and entire; pillar lip spreading somewhat like a fan; and the exterior lip cut off. We have deemed it requisite to advert to these new genera, but as the shell itself is so clearly a **Trochus**, we have not thought it necessary to remove it from the place in the Linnæan System to which Gmelin had assigned.





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PLATE XII.

PAPILIO EGÆA

EGÆA'S BUTTERFLY.

ORDER

LEPIDOPTERA:

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob: wings erect when at rest. Fly by day.

* NYMPH. GEMM.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented: above black, with a common white band: posterior pair with two ocellar spots beneath.

PAPILIO EGÆA: alis dentatis supra nigris: fascia communi alba, posticis subtus ocellis duobus. *Fabr. Syst. Ent.* 496. 231.—*Spec. Ins. T. 2.* 79. 351.—*Ent. Syst. T. 3. p. 1.* 100. 309.

PLATE XII.

Parvus. Alæ omnes supra nigræ, basi cyaneo nitentes, in medio fascia communi anteriorum interrupta, alba. Maculæ duæ parvæ, albæ versus apicem alæ anterioris; subtus anticæ fuscæ maculis albis lunulaque media, ferruginea. Posticæ basi fasciis albis fuscisque alternis disco niveo, macula bilobâ, fusca, et in hac ocelli duo atri, iride ferruginea pupillaque magna, cyanea. Margo posticus flaves-
cens. *Fabr. Ent. Syst. T. 3. p. 1. 309.*

We have much pleasure in assuring our readers that the present figures of this very elegant and rare *Papilio*, are the first that have appeared in illustration of the species. This becomes the more incumbent to observe, because those figures afford an elucidation of some moment at least, to the writings of an Entomologist of acknowledged eminence, the late Professor Fabricius: he had described the species in his several works as above adverted to, under the name of *Papilio Egæa*, but these descriptions have remained before the learned world for nearly half a century without any pictorial illustration. The existence of such a species is therefore well known, but from description only, and this circumstance, it is presumed, will tend to confer more real interest upon the figures now produced, than if it had been entirely undescribed, because, heretofore, a deficiency has been in this respect perceived; and that deficiency is now supplied by the figures submitted to our readers in the annexed plate.

The first description of this species, as already intimated, to be found among authors, is that given by Fabricius in his *Systematica Entomologia*: subsequently it appeared in his work entitled *Species Insectorum*, and lastly in his *Entomologia Systematica*, as inserted among our synonyms. It is these authorities that have supplied

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Gmelin with the description of the species as we find introduced by him, into the last edition of the Linnæan *Systema Naturæ*.

The Fabrician description of this insect was taken in the first instance, *Syst. Ent.* from a specimen in the Hunterian collection : the same description occurs again in *Spec. Ins.* and lastly, in far more copious detail in *Ent. Syst.* This latter description given by Fabricius, though by some oversight of its author, not indentified by any reference with the drawings of Mr. Jones, was certainly derived from that source of authority ; a point we have been enabled to ascertain, both upon the kind information of our late worthy friend Mr. Jones himself, and also from the manuscripts in the hand-writing of Fabricius, which Mr. Jones was pleased to place in our hands, in order to assure us, there could be no uncertainty in this respect from any lapse of memory. Fabricius refers for his *Papilio Egæa* to the Hunterian cabinet. There was a specimen of this insect in that collection, but it may not be improper to observe that the specimen from which the drawing of this species, *Papilio Egæa*, by Mr. Jones, was taken, as it appeared from these MSS. was one preserved in the cabinet of Mr. Drury, the venerable author of a well known work on Exotic insects, published towards the close of the last century. We may also add, that this insect, with many others which Mr. Jones had figured, and Fabricius had described, from that extensive and valuable cabinet, devolved into our hands after the death of its proprietor, the whole collection having been dispersed by public sale in the month of May, 1805.

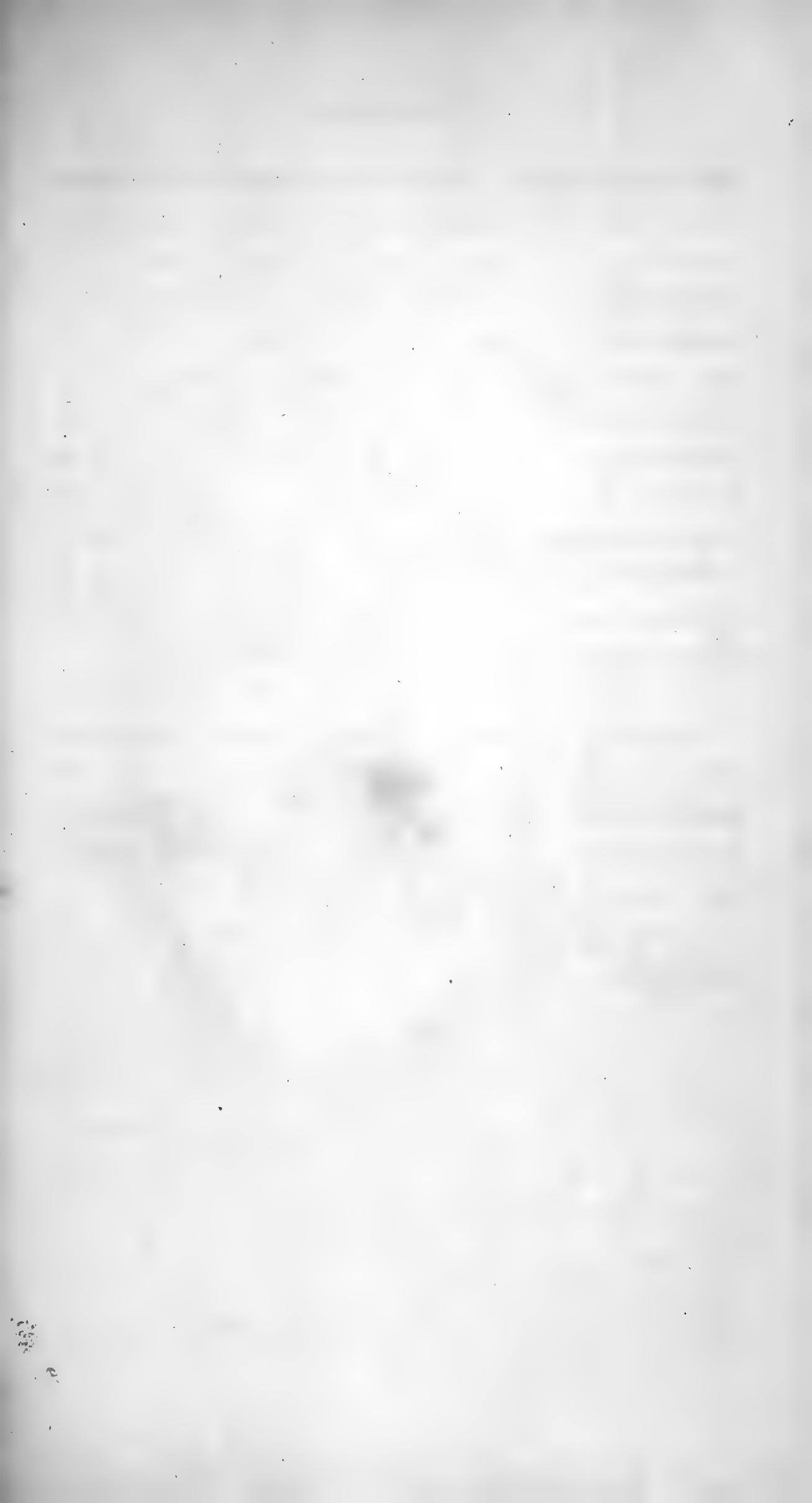
We have been thus minute in the production of authorities, in order to demonstrate that we have not ventured upon the hazard of conjecture to submit the present figures as those of the true *Papilio Egæa* of Fabricius ; and, consequently, of all later writers who have

PLATE XII.

relied upon his evidence. In stating this, it may not be amiss to add still further for the information, as well as the gratification of the Naturalist, not of this country alone, but of Europe generally ; and indeed of every portion of the world to which the light of science may extend, that we are in possession of the like authorities for the whole series of those Papiliones which Fabricius has described from the drawings of Mr. Jones, and which, in most instances, are the only unequivocal authorities now remaining. Possessing this means, it shall become the great object of our care to rescue from obscurity and doubt that ample portion of the scientific writings of Fabricius, by similar illustrations of the more beautiful and rare species, of which no figures are extant, as often as we conceive the requisite variety of our a miscellany will permit* their introduction.

Papilio Egæa is a native of America; it is a species of that family which is distinguished by the name of *Nymphales Gemmati*, having eyes, or ocellated spots upon all the wings ; it is represented in the annexed plate in a flying posture, as well as in its resting position.

* We have lately understood that the editors of *Encyclopædie Methodique*, now publishing in Paris, intend giving figures of the Papiliones of the Equites family, which Fabricius has described. This endeavour to illustrate Fabricius is under the direction of Mons. Latreille, a Member of the National Institute, an Entomologist himself, of acknowledged talent, and one to whose great ability, as well as personal urbanity, we are happy to bear our testimony of praise. In the absence of more conclusive authority, the conjectures of Mons. Latreille would be, unquestionably, useful ; but we shall, ourselves, tread the same path, and as we trust, may assist also, in no small degree to dispel the darkness which at present overshadows this fair portion of the science. As we are, ourselves, possessed of the authentic evidences, by means of which, the species of Fabricius can be immediately identified, we have no occasion to wander into the labyrinths of conjecture : we at once arrive at the certainty of truth. The annunciation of this design, on the part of the French editors, leads to a conclusion of the importance attached to this endeavour : it need be only stated on our part, that the illustrations we shall subjoin to such of the Fabrician species as may pass under our own observations, will be precisely taken from the individual objects which Fabricius has described.





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PLATE XIII.

PAPILIO PYLADES

PYLADES BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob : wings erect when at rest. Fly by day.

* EQUITES ACHIVI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented, snowy : border black with white dots : ocellar spot in the anal angle of the posterior wings rufous.

PAPILIO PYLADES : alis dentatis niveis : limbo atro albo punctato, ocello anguli ani rufo. *Fabr. Ent. Syst. T. 3.*
p. 1. 100. 34.

Jon. pict. T. 1.

L

PLATE XIII.

Alæ omnes supra atræ, albo punctatæ disco omni albo, immaculato. Angulus ani ocello rufo. Subtus pallide flavescentes, albo punctatæ discoque albo. Linea rubra a basi ad medium costæ.
Fabr. Ent. Syst. T. 3. p. 34.

The Entomologist of the present day must naturally remain under some uncertainty as to the identity of the Fabrician *Papilio Pylades*, since no figure whatever has hitherto appeared in elucidation of this rare *Papilio*; and in this instance, as in almost every other, whatever advantage we may be able to derive from the very accurate and elaborate descriptions of our author, it would be absurd to deny that a faithful delineation of the insect described, is not essentially requisite, in order to determine with perfect satisfaction, the precise species *Fabricius* had intended.

But, besides the want of a correct delineation, there is yet another circumstance, not, perhaps, at present known, which might have tended also to perpetuate this ambiguity, had it not been in our power to explain it: the intimation of which, it is presumed, will be considered useful by the scientific Entomologist. Previous to the time of *Fabricius* this elegant species had been unnoticed by any author. *Fabricius* describes it in his *Entomologia Systematica*, and refers for the specimen so described to the Cabinet of *Mr. Francillon*. That the insect, to which he adverts, was included in that celebrated cabinet, we are well assured from our own inspection, but it stood there unaccompanied by any indication of its being a specimen described by *Fabricius*, or even a Fabrician species. The truth is, that Professor *Fabricius*, upon this occasion, as in some others, took

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his description, not from the specimen itself, but from the drawings of Mr. Jones, of Chelsea, which had been copied from the specimen in the cabinet of Mr. Francillon, and it was to the drawing therefore of Mr. Jones, and not to the specimen of Mr. Francillon's cabinet that Fabricius annexed the name of *Pylades*. Those drawings must for this reason be now considered as the only positive memorial of the identity of the Fabrician species, *Papilio Pylades*, that remains extant at this time. The figures, it may be added, which are submitted in the annexed plate, are faithful copies from the original drawings of Mr. Jones, so inscribed in the hand writing of Fabricius, a circumstance that must remove every shade of doubt as to the individual object to which Fabricius had assigned that appellation.

Papilio Pylades is a species of the Butterfly tribe, of moderate size, in comparison with the generality of those which appertain to the same family, the *Equites Achivi* of Fabricius. The upper surface exhibits an appearance of much simplicity and elegance: the disk is white, and the broad black limb, or border, by which it is surrounded, is marked with a number of spots and semilunar marks of white disposed with much regularity. The disk of the lower surface is also white, but surrounded with a pale brown, or fulvous limb, and marked with white spots in the same manner as the broad black border on the upper surface. A few of the white spots on this fulvous border are surrounded by black lines and spaces. There is also a red band marked with black and blueish spots, that extends along the main or anterior rib of the upper wings, from the base, as far as the middle of the wing, and a spot of red at the base of the posterior pair.



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PLATE XIV.

AMPELIS CAYANA PURPLE-THROATED CHATTERER.

PASSERES.

GENERIC CHARACTER.

Bill straight, convex, slightly incurvate: mandibles notched: nostrils covered with bristles: tongue acute, cartilaginous, bifid: middle toe connected at the base to the outer one.

SPECIFIC CHARACTER

AND

SYNONYMS.

Cærulean blue: neck beneath violet: quill and tail feathers black, edged with blue.

AMPELIS CAYANA: *nitida cærulea, collo subtus violaceo.* *Linn.*

Syst. 1. p. 298. 6.—Gmel. Syst. 1. p. 840.

AMPELIS CAYANA: *nitida cærulea, collo subtus violaceo remigibus rectricibusque nigris cæruleo marginatis.* *Lath.*
Ind. Orn. 1. 365. 3.

PLATE XIV.

Cotinga Cayanensis. *Briss.* 2. p. 344. 32. t. 34. f. 3.

Lanius Ococolin. *Klein. av.* p. 54. 6.—*Seba.* ii. p. 102. t. 96. f. 3.

Cotinga de Cayenne, Quereiva. *Buff.* 4. p. 444.—*Pl. Enl.* 624.

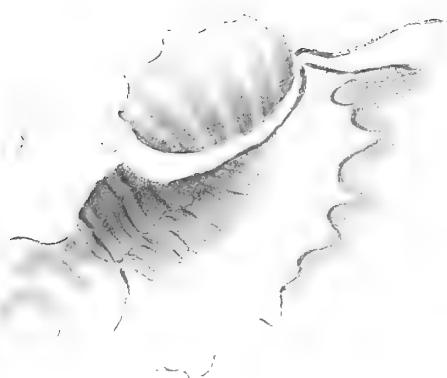
PURPLE-THROATED CHATTERER. *Lath. Syn.* 3. p. 95. 3.

The Purple-Throated Chatterer is assuredly one of the most beautiful of the feathered race, at present known; the general colour of the plumage, a blue of most transcendent brightness, and highly changeable, varying from a fine cærulean, or azure, to a green of equal delicacy and beauty. There is an intermixture of black disposed in spots throughout; one half of each feather, from the base, being black, and only the tips blue, so that the plumage appears more or less spotted with black, as the feathers are ruffled or misplaced from their natural position. The region of the chin and throat is of a beautiful crimson purple, whence its name of Purple-Throated Chatterer. The greater wing coverts are black, varied and spotted with blue: the quills and tail black with blue margins: the bill black with the lower mandible rather paler: the legs black.

This brilliant species of the Ampelis tribe has been sometimes denominated the Ultramarine Thrush, and not unfrequently the Ultramarine Starling: its size resembles that of the Starling, and there is also a general similitude in its form and manners, but it is, nevertheless generically distinct.

Inhabits Cayenne, and probably some other parts of South America.





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PLATE XV.

MUREX FOLIATUS FOLIATED MUREX OR, FOLIATED ROCK SHELL.

UNIVALVE.

GENERIC CHARACTER.

Shell spiral, rough with membranaceous sutures : aperture oval, ending in an entire straight or slightly ascending canal.

* Sutures expanding into crissed foliations : beak abbreviated
PURPURA Gmel.

SPECIFIC CHARACTER

AND

SYNONYMS.

Three rows of foliations : aperture one-toothed.

MUREX FOLIATUS : testa trifariam frondosa : apertura unidentata.

Gmel. Linn. Syst. T. 1. p. 6. 3529. 174.—

Martyn Conch. 2. t. 66.

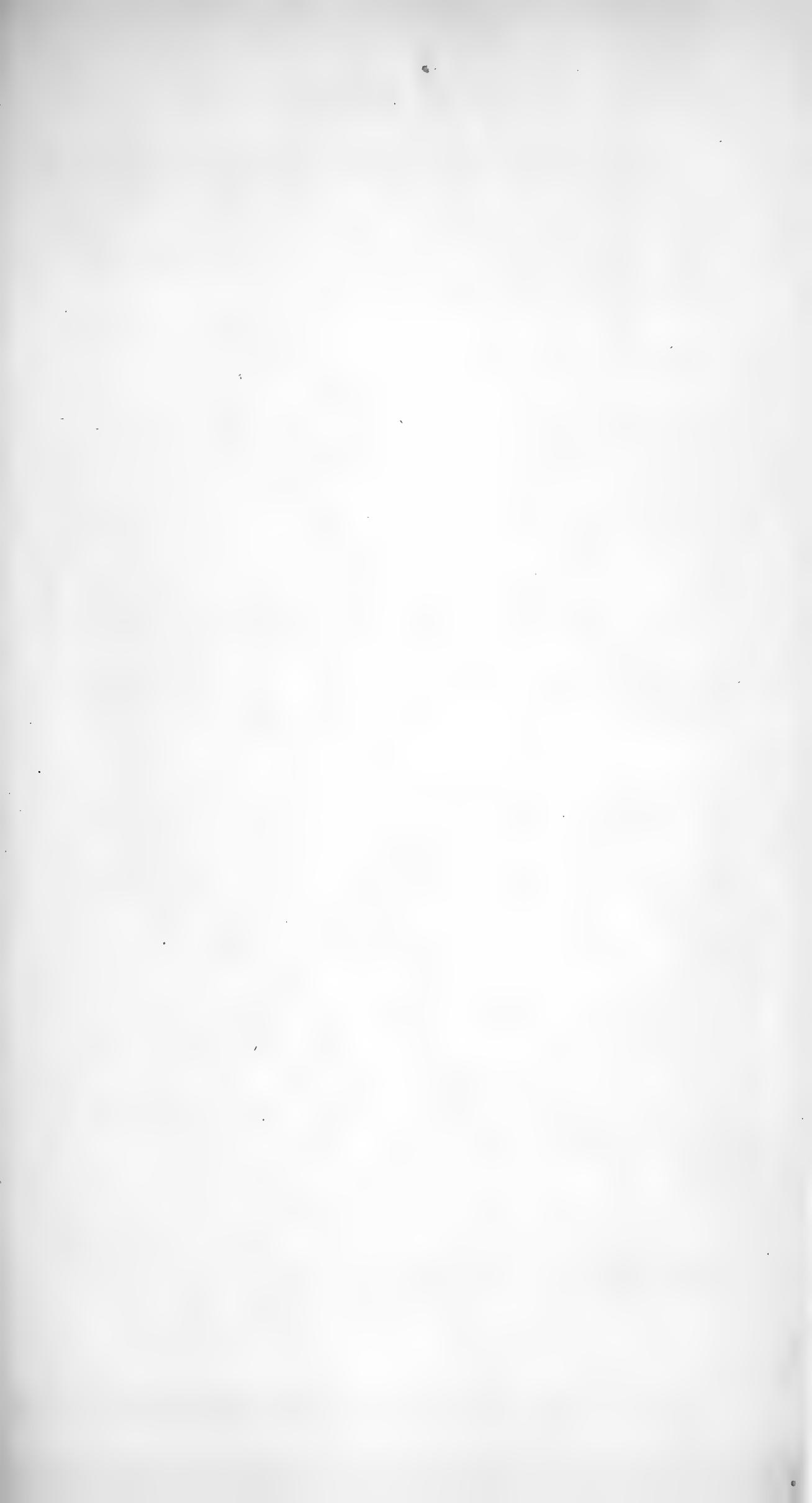
PLATE XV.

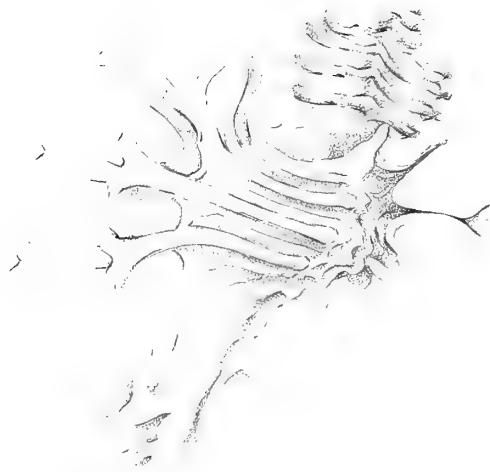
MUREX *Purpura alata*, testa triangulari, transversim costata trifariam frondosa, frondibus alatis membranaceis instructa cauda recta clausa, labro latissimo, labio adnato, apertura subovata, fauce alba. *Chemn. Conch.* 10. f. 1538.

This is a shell far more remarkable for the singularity of its growth, than for any elegance or beauty of its colouring. The peculiarity of its character consists in the large, erect, and longitudinal foliations, which are disposed in three distinct, and nearly equi-distant series throughout the whole length of the shell: for they appear in continuity upon every whorl, from the base to the apex. It is from this peculiarity that the species has obtained the very appropriate appellation of *foliatus*, or **Foliated Rock Shell**.

In point of colour, as before observed, the *Murex foliatus* is not particularly conspicuous, and they are of a texture so delicate that it almost constantly occurs in a bleached or depauperated state; it is also a very fragile shell, and from this cause very liable to be broken. When in fine condition, as in the example selected, for the representation now before us, the general hue is a lacteal white; the body of the shell, externally, a deep tawny, with the foliations whitish, and the opening, or mouth of the shell, very delicately tinted with a violaceous hue. Sometimes the foliations have the appearance of fine white porcelain.

This is esteemed a scarce shell, and very rarely occurs perfect, or in a living state. Found on the sea coast of North America.





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PLATE XVI.

MUREX SCORPIO

var MINOR

LEAST STAG'S HORN MUREX.

UNIVALVE.

GENERIC CHARACTER.

Shell spiral, rough with membranaceous sutures: aperture oval, ending in an entire straight, or slightly ascending canal.

* *Sutures expanding into crisped foliations: beak abbreviated.*

PURPURA Gmel.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell with four rows of foliations: spire capitate: beak truncated.

M

PLATE XVI.

MUREX SCORPIO: testa quadrifariam frondosa: spira capitata, cauda truncata. *Mus. Lud. Ulr.* 628. n. 296.—
Gmel. Linn. Syst. T. 1. p. 6. 3529. 14.—
Rumpf. Mus. t. 26. f. D.—*Seba. Mus. 3. tab. 77.*
fig. 13. 16.

Cochlis volutata muricata parva sex duplii laciniarum serie horrida, spiris quatuor capitatis faucibus, quasi Scorpionum forficulis armatis. *Purpura quæ SCORPIO Auctorum. Chemn.*

The extraordinary form of this very rare and singular kind of Murex cannot fail to interest the curious observer. The shell is of the spiral kind, with an oval aperture; the head of the spire large or tumid, and the first or body whorl beset with four distinct longitudinal rows or series of elongated foliations or processes. These last mentioned appendages are flat and somewhat cylindrical from the base nearly to their summits, where they become cleft or furcate, expanding most commonly into two, sometimes three, or rarely four distinct little lobes, and the radiation of these process by which the exterior margin of the aperture is encircled, have a groove or canal extending from the margin of the lip to the cleft or lobate summits.

The learned Seba, to whom this very remarkable shell, it appears, was known, has well observed in speaking of the Murices, which he describes, that this kind is more particularly distinguished by the greater disproportion of those advanced processes in comparison with the size of the body of the shell than any other of his species; so that their superior length in this respect was, in his

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opinion, to be considered truly characteristic of the species.* It is from these processes it may be also added, that this curious shell has been variously and not unfrequently fantastically designated by appellations that cannot very readily be reconciled in our ideas with any object they have been supposed to resemble, even admitting that latitude of fancy which may be tolerated when we are entirely aware that the assimilation is remote. Thus this shell has obtained in various languages names according with those of the Ragged Spike Whelk, the Stag's Horn Whelk, the Skeleton, Water Trough, and others of no less vague import. The Least Ragged Whelk is a name assigned to it by our countryman Petiver: the Scorpion Shell is a very old name for it among the early collectors, it is the *Murex Scorpio* of Rumpfius. In France it was distinguished formerly by the name of *Patte de Crapaud*, (the Toad's Foot) because, says the author of Davila's Catalogue, besides the spires on the body, the exterior edge of the lip is bordered with others that are very large and flat at the extremity, and no doubt, for the same reason it is called by Seba *Bufo-nis Pedes*. It was known at that time also among the collectors in Holland by the name of the Stag's Horn,* from a remote similitude which these processes are supposed to bear to the horns of that quadruped. And lastly, in conclusion it may be added, that for nearly half a century past it has been distinguished among the collectors of this country by a title not less whimsical, namely, the "Water Wheel," from a fancied similitude the contour of the shell and its verticillation of processes bear to the circle and lamellar appendages or sweeps of a water wheel.

* "Cornua cervina—*bois de cerf.*"—Seba.

PLATE XVI.

Not one of any of those various appellations, it must be confessed, appear so applicable and well chosen as to supersede the propriety of introducing any other that might be deemed tolerably appropriate, but upon the whole the species and varieties which it embraces have been so long known by the name of the Scorpion Shell, that there can be no great impropriety in allowing it to remain under that name: we have for our example the authority of Rumphius, and the sanction of Linnæus throughout all his works; and in the Gmelinian System it also stands under the name of *Murex Scorpio*. The appellation of the Stag's Horn Murex, in conformity with the epithet assigned to it by the old French writers "*bois de cerf*," is not altogether inappropriate, the elongated processes have much the appearance of the antlers of the stag, in the first stages of their growth; or considered in the aggregate, the shell presents a number of ramosc processes like the horns of the Stag or the Rein Deer, and some other quadrupeds of the Cervine tribe; a characteristic feature that may perhaps justify the appellation.

There are several varieties of this remarkable shell, some of which might at the first view be considered as distinct species, and in reality have been occasionally arranged as such by collectors. These upon the most attentive comparison do not, however, appear to differ specifically, notwithstanding the differences in point of colour are very striking. One variety rather exceeds the rest in size, and is of a deep testaceous or tawny brown colour, or rather inclining to a chesnut hue: we have seen it of a tawny tint with darker splashes upon the transverse ribs, particularly on the body and the tumid whorl of the spire. Occasionally this shell also occurs of a deep or Ethiopian blackness; this kind is extremely rare. The white variety occurs more frequently, but is, nevertheless, uncommon in comparison

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with the brown or testaceous kind : two examples of the white variety, clouded with yellow, appears to have occurred in the celebrated cabinet of the French collector Davilla, about the year 1776. He distinguishes them by the title of “deux petites *epineuses*,” and tells us they have six longitudinal sides like the “*rameuses*,” which are also named “*Pattes de crapaud*,” an epithet by which we are well aware the Linnaean *Murex Scorpio* was discriminated, and which therefore leads to a conclusion that the “*epineuses*” of a white colour, clouded with yellow, which that cabinet contained, were not specifically distinct from the shell at present under our consideration. When extremely fine the white variety of this shell is usually very delicately tinged with violet in all its shades and transitions of light.

All these varieties, as before observed, are very easily reconciled to the same species ; nor is it ourselves alone that are inclined to this opinion. Seba, to whom the larger brown and white variety, were known, admits them as the same without any hesitation.* The expression “*Testa alba aut fusca*,” in the Linnaean description of this shell in the cabinet of the Queen of Sweden, implies the like persuasion, and the authority of Chemnitz may be adduced still further in support of this opinion : Some modern writers have thought differently, but we must confess the distinctions they assign are by no means satisfactory to us. The larger shell is usually of a brown colour, but we

* “*Horum processus admodum producti sunt ; ut ideo Cornua cervina appellantur ob qualemque similitudinem. Corpus tamen Coehleæ semper pro ratione ramorum minus est, quam in Muricibus superioribus.*”*—*Seba T. 3. tab. 77. p. 172.*

* As *Murex ramosus*, of which several varieties are given in the plates *Seba, Murex Saxatilis, &c.*

PLATE XVI.

have seen one of the white variety rather larger than any of the brown colour that have occurred to our notice.

The shell we have selected for the figures in the annexed plate is chosen rather for its extreme perfection than the superiority of size ; we have observed it larger by nearly one half, but have not in any instance met with one more entirely perfect : it is delineated from the example of this very curious species in the late Leverian Museum.

This species which for a century past or more has maintained its reputation as a rare production is still held in much esteem, and bears a price proportionately considerable : it inhabits the shores of Southern Asia. Gmelin has the expression “*Habitat pretiosus et rarus in mari, Asiam australem alluente, &c.*” and describes the species as being either white, brown, or black.





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PLATE XVII.

PSITTACUS GALGULUS

SAPPHIRE CROWNED PARRAKEET

PICÆ.

GENERIC CHARACTER.

Bill falcated ; upper mandible moveable, and in general covered with a cere: nostrils rounded, placed in the base of the bill: tongue fleshy, obtuse, entire: feet formed for climbing.

SPECIFIC CHARACTER

AND

SYNONYMS.

Green: rump and breast scarlet: crown of the male blue.

PLATE XVII.

PSITTACUS GALGULUS: viridis, uropygio pectoreque coccineis,
vertice (maris) cæruleo.—*Linn. Amoen. ac. 4.*
p. 286.—Mus. Ad. Fr. ii. p. 16.—Osbeck. it. 101.

PSITTACUS GALGULUS: viridis, uropygio pectoreque coccineis,
vertice cæruleo, lunula cervicis lutea, tectricibus
caudæ rubris.—*Lath. Ind. Orn. T. 1. 148. p. 131.*

Perruche a tête bleue. *Buff. hist. nat. des. ois. 6. p. 163.*

Petite perruche de Péron. *Buff. pl. enlum. n. 190. f. 2.*

Petite perruche de l'isle de Leçon. *Sonner, it. p. 76. t. 33.*

Sapphire-Crowned Parrakeet. *Edw. glean. t. 293. f. 2.*

This gay little creature is one of the smaller kind of the *Psittacus* or Parrot tribe, and of that family which is distinguished by having the tail short and equal at the end. Its size is rather less than that of our common house sparrow. The prevailing colour of the plumage a rich vernal green, deepest in its hues on the back and wings, and rather paler or more delicate in its tint beneath ; the breast and rump scarlet ; the feathers of the latter elongated and extending far over the tail, which is green ; the crown of the head a beautiful Sapphirine blue. This appears to be the male bird. That which is considered as the female has a yellow spot upon the throat : it is destitute of any scarlet spot upon the breast, and the Sapphirine colour on the crown of the head is also wanting.

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These are the characteristic distinctions observable generally in the species; besides which there are other less material particulars in which these birds are known to differ.

In some birds we find a yellow transverse stripe on the hind part of the neck, varying in colour from luteous to orange, and which is more or less conspicuous in different individuals. Others have a somewhat similar band of yellow, but which is situated at the back of the head instead of the neck. The first of these is distinguished by the name of the Sapphire Crowned Parrakeet, the other by that of the Phillipine Parrakeet. Dr. Latham has endeavoured to establish the characteristic distinctions of these two kinds in his *Index Ornithologicus*: he considers them as permanent varieties, but we must confess we regard them rather as accidental than permanent. The characteristic band of yellow by which they are to be discriminated chiefly, appears to be more or less developed in different birds at different periods of their growth; and in the absence of this character from the back of the head in the Phillipine Parrakeet, or the hind part of the neck in the Sapphire Crowned Parrakeet, the resemblance is so very near as to afford no certain means of distinguishing one from the other.

This bird has been long known in Europe. It appeared in the work of Edwards, the ingenious English Ornithologist, who lived about the middle of the last century. Linnæus describes the species with much critical minuteness in the fourth volume of his *Amoenitates Academicæ*, as **PSITTACUS GALGULUS, brachiurus viridis pectore uropygioque coccineis, vertice cæruleo**; and this description accords so exactly with the bird before us, that no doubt

PLATE XVII.

whatever can remain of its being exactly the variety which that eminent Naturalist has described.

Edwards informs us that this bird is a native of Sumatra; Osbeck met with it in Java, where he tells us it is known by the name of Parkicki. The title of Perruche de Perou which it bears in *Pdl. Enl.* might induce a persuasion of its being an inhabitant of South America, which, however, is not believed among Ornithologists. We have already mentioned that it occurs in the Phillipine Islands, and that from this locality, the particular variety found there has obtained the appellation of the Phillipine Parrakeet.

We are indebted to Osbeck for a concise description of the manners of this interesting species when in a state of captivity, "if put into a cage," observes this traveller, "it whistles very seldom and commonly grows quite sullen: it hangs itself with its feet so that the back is turned towards the earth, and seldom changes this situation: it is fed with boiled rice; in which manner, in the year 1752, one was brought to Gottenburgh." It is probably this information to which Linnæus alludes in his Academic paper, delivered in 1760, where in speaking of the manners of this bird, he tells us it sleeps on trees, suspended by one foot with its head downwards, in order to escape the observation of the rapacious birds of night. The nest of these birds are described by Toreen. "We observed," says this writer, "that their nests were remarkable for their exceeding fine texture, but we did not see the birds. If these nests were differently constructed, the monkies would be very mischievous to them; but now, before they can get to the opening, the lowest part, as the weakest, breaks into pieces, and the visitor falls to the ground without danger to the young birds."

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This bird is observed to be very partial to the fresh juice of the cocoa tree, which flows from the ends of the branches when the fruit has been fresh cut off; and which before it undergoes fermentation is said in taste to resemble new-made cyder.





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PLATE XVIII.

PAPILIO ACAMAS

ACAMAS BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob : wings erect when at rest. Fly by day.

* EQUITES TROJANI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented, caudated, or ending in a tail ; brown, above and beneath the same colour ; anterior wings with a yellow band, posterior wings with red, blue and yellow lunules.

PLATE XVIII.

PAPILIO ACAMAS: alis dentato caudatis concoloribus fuscis :
anticis fascia flava, posticis lunulis rubris cœruleis
flavisque.—*Fabr. Ent. Syst. T. 3. p. 1. 8. 22.*—
Jon. fig. pict. 1. tab. 72.

Papilio Acamas is one among the number of those Papiliones, which, from their magnitude, as well as beauty, constitute the more attractive species of the first family of this interesting tribe, the *Equites Trojani* of the Fabrician system. Papilio Acamas is scarcely surpassed in size by any other of the Papilio genus, and when it is added, as it may be with confidence, that the figure now presented to the reader is the first that has appeared in elucidation of such a noble species, we cannot doubt that its introduction will be received with pleasure by every Naturalist in this country and throughout Europe.

This fine and very striking species has been long since known by repute to Entomologists ; but from the description only which Fabricius had left us in his *Entomologia Systematica*. Those conversant with this work of our author, will be aware, that Papilio Acamas constitutes one of those many species for which Fabricius refers only to the drawings of the late Mr. Jones : the present figure is a faithful copy of that original drawing referred to and described by Fabricius, and as such cannot fail to prove acceptable to every Entomologist. It is certainly the only figure extant by means of which the Fabrician species P. Acamas can be ascertained.

The identity of this species, it will hence appear, does not rest upon opinion or conjecture, and this circumstance must be deemed

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of no small importance in an enquiry of this nature. In the present instance it may be also added that this identity is essentially material to be considered, because there is another insect of the same tribe, the *Papilio Laodocus* of the same author, which assimilates so closely with it, that without due attention, the one might readily be confounded with the other. These two butterflies, however, although they appear so nearly allied, present characters which considered accurately, demonstrate very clearly that Fabricius was right in separating them. Fabricius adverting to this close affinity, observes, that in size and appearance *Papilio Acamas* agrees with *Papilio Laodocus*. The predominant colour of *P. Acamas*, he observes, is a dark or fuscous brown, much less inclining to black than *P. Laodocus*. The anterior wings in both species have a yellow transverse band: this band in *P. Acamas* extends from the anterior margin almost close to the posterior margin, and touches the posterior rib; in *P. Laodocus* this yellow band is abbreviated or shorter, of greater breadth, and placed more immediately towards the middle of the wing, the band in *P. Acamas* being situated rather nearer towards the exterior end of the wing. There is also a marginal series of yellow spots at the extremity of the anterior wings, the form of which is very singular, and affords a striking distinctive character of *P. Acamas*. There is also a characteristic difference observable in the markings of the posterior wings: in both species, on the upper as well as lower surface, those wings are elegantly marked with a distinct arch of red lunules, posterior to which is another of blue; beyond these in *P. Acamas* is a third series of lunules, rather larger than either of the former, the colour of which is bright yellow. There is a final or posterior arch of lunules in *P. Laodocus*, behind the two series of red and blue lunules, similar to those of *P. Acamas*, but they are smaller, and instead of yellow are white. And lastly, the

PLATE XVIII.

body in *P. Acamas* is dark brown above and pale beneath: in *P. Laodocus*, on the contrary, the body beneath as well as above is black, with a longitudinal line each side the body.

We have been thus minute in pointing out precisely the differences that prevail between these two *Papiliones*, from a persuasion that they might perhaps be otherwise confounded together, either as the same species, or as varieties of each other. There is assuredly a general approximation in the appearance of those two insects, although they prove so very distinct upon a close and attentive comparison.

Papilio Acamas is a native of Jamaica: *Papilio Laodocus* of South America. A figure of *P. Laodocus* occurs in the work of Cramer, under the name of *Papilio Glaucus*.



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PLATE XIX.

PAPILIO HOMERUS HOMER'S BUTTERFLY.

ORDER

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob : wings erect when at rest. Fly by day.

* EQUITES ACHIVI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings caudated or terminating in tails, black with a yellow band ; lower ones yellowish beneath, with seven ocellar spots :

O

PLATE XIX.

PAPILIO HOMERUS : alis caudatis nigris: fascia flava posticis subtus
flavescensibus: maculis ocellaribus septem.--*Fabr
Ent. Syst. T. 3. p. 1. 29. 85.*

PAPILIO HOMERUS: *Jon. fig. pict. 1. tab. 8.*

Corpus magnum nigrum. Alæ anticæ supra nigræ fascia maculari maculisque apicis flavis. Subtus anticæ concolores, at macula apicis tantum unica, marginalis, albida posticæ fuscæ, fascia media pallida maculis septem ocellaribus, atris iride rufa.

In the present instance, as in many others that will occur during the progress of this undertaking, we have the pleasure of introducing to the attention of the Naturalist, a species of the Papilio tribe, no less distinguished for its beauty than its rarity; and one, moreover, that has never been before depicted in the work of any author.

This magnificent Papilio, for to this appellation it is entitled truly, was one among the number of those rarities of the insect race which Fabricius met with in the Entomological Cabinets of the English Naturalists, when he paid a visit to this country about the year 1792, and the descriptions of which constitute a most invaluable and extensive portion of the work which he published subsequently upon the continent, under the title of *Entomologia Systematica*. Fabricius saw the drawing of this insect in the Collectanea of Paintings formed by the ingenious hand of that indefatigable and liberal Naturalist the late William Jones, Esq. of Chelsea, and was so delighted with

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its grandeur, as an insect altogether undescribed, that he determined upon assigning to it some name of pre-eminent distinction. The tribe of insects to which it naturally appertains in systematic classification, is that of the *Equites Achivi*; all the species of which are named after the Greeks, and more especially of those commemorated in the Iliad and the Odyssey: the heroes of the Trojan war. This rule determined his choice, and we may readily conceive his admiration of the species from the name selected upon this occasion, *Papilio Homerus*. If Homer had no claim to be considered as a Greek, he had sang the achievements of the Grecian heroes, and had mourned the fall of Troy; and Fabricius disposed alike to compliment the immortal bard, and define the species by an appellation more than usually superlative, has consecrated it to the memory of that ancient poet.

If we advert to the writings of Fabricius, it will be found that this author refers for a figure of this fine *Papilio* solely to the Paintings of Mr. Jones. The reference is to the eighth drawing of the first volume of his collectanea. This is perfectly correct, the figure occurs in that collection of paintings as Fabricius states, and in the part described. We have not only seen it there with the name assigned to it in *Entomologia Systematica* PAPILIO HOMERUS inscribed in the hand-writing of Fabricius, but are at this time in possession of an exact copy of that drawing, taken by the express permission of its former very worthy proprietor; and it is from this copy of the original drawing so inscribed by Fabricius himself, that the very beautiful figure is taken which accompanies the present description.

Notwithstanding the general accuracy with which Fabricius has related the local circumstances connected with the history of the

PLATE XIX.

insects which he describes, there are occasionally errors in this respect it must be satisfactory to many of our readers to have corrected : errors, which, owing to the lapse of time and death of those distinguished Naturalists which Fabricius had the happiness of meeting with in England, we may venture to presume, without vanity, can be now corrected only through the medium of our assistance. The celebrity of Fabricius throughout Europe as one of the best informed Entomologists of the last century, renders it even of no small importance to correct the most trivial oversights he has committed ; and this consideration will, we trust, afford us some apology for that minuteness, if not prolixity with which it may be requisite occasionally to relate particulars of a local nature, in order to correct such errors. An instance of this kind occurs in the note annexed to the Fabrician description of the *Papilio* now before us ; in stating the local circumstances connected with its history, Fabricius says *Habitat in America. Dom Latham.* There is obviously an oversight in this passage, for we well know that the Fabrician description of this species was taken from the figure in the series of drawings painted by Mr. Jones, which has been already mentioned ; the original of the figure now presented by us to the attention of our readers ; and that the specimen of the insect itself from which that painting was taken was preserved at the time Fabricius described it in the celebrated collection of the late Mr. Dru Drury. As we had the pleasure of Mr. Drury's acquaintance, as well as that of Mr. Jones, and had an unreserved access to the information and cabinets of both, we are enabled to speak upon this circumstance with confidence. The example of *Papilio Homerus* in the cabinet of Mr. Drury was perfectly familiar to us, it was ourselves who wrote the name *Homerus*, annexed to this insect in that cabinet ; and so far as our recollection serves at the distant period of five and twenty years, Mr. Drury stated to us that

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he had received this individual specimen from the Island of Jamaica. We are in possession of the Entomological manuscripts of this venerable author, but among those we have in vain sought for any positive confirmation of this distant recollection. It appears certain that Mr. Drury had not entered it under the name of *Homerus* in his catalogue after we had communicated that name to him ; and which we did upon the authority of the Fabrician manuscripts annexed to the drawings of Mr. Jones. At the time Mr. Drury received this insect from his correspondent it was assuredly a nameless species, and was probably entered as such, with a number only ; such omissions in the nomenclature being, of course, usual when the species proved to be undescribed, till proper names could be assigned to them. A gentleman of the name of Keuchan, and another of the name of Whiting, appear from these entries to be the only correspondents who furnished Mr. Drury with Papiliones of Jamaica ; it was probably from the former that he obtained this majestic species ; and that Mr. Drury obtained it about the year 1777. This *habitat* would justify Fabricius in describing the insect as a native of America, although if the conclusion be correct, it might have been stated more distinctly as a native of that island.

At the dissolution of the fine collection of that indefatigable Entomologist, Mr. Drury, which took place by public sale in the month of May, 1805, this beautiful insect was purchased by another very eminent collector, Mr. John Francillon, at the price of *four pounds sterling*,* and subsequently at the death of this last mentioned individual, which happened in the year 1817, it passed

* Lot 305, third day, Saturday, May 25th, 1805.

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with many others of the more costly rarities into the cabinet of Alexander Mc'Leay, Esq. S. L. S. &c.

With respect to the Fabrician reference to the cabinet of Dr. Latham, for it is to the cabinet of the venerable Ornithologist of that name the reference applies, we believe it is also in our power to explain its origin, having occasionally, through the kindness of its proprietor, consulted that cabinet, and finally, in conformity with his permission, written a catalogue of its contents. In that cabinet we certainly observed a *Papilio* allied to *P. Homerus*, but yet so far remote from it, that we could not venture to pronounce it the same; it may be a variety of the species, but is assuredly not the insect painted by Mr. Jones to which the synonyms of Fabricius allude.

Papilio Homerus is represented in its natural size in the annexed plate. Its colours are various and very beautifully disposed: the ground or prevailing colour is a deep or dark brown with a broad stripe of a yellowish hue across the middle of each wing, forming very nearly a band of that peculiar kind distinguished among Naturalists by the appellation of a common band. There is also a large and somewhat quadrangular spot of the same flavous colour upon the disk within and contiguous to the band, and beyond, towards the apex, a small sub-angular band composed of smaller flavous spots. Behind the yellow band, across the disk of the posterior wings, are a series of blue spots composed of many little shining points, which in the aggregate form a distinct spot of an ovate form, most brilliant towards the centre and paler towards the edge. And finally, there are three distinct sublunate spots of red on each posterior wing, one at the anal angle, and the other two at the posterior margin, one of

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which is situated on each side near the base of the tail. Beneath, the anterior wings are uniformly dark with a single pale or whitish marginal spot at the tip ; the lower wings of a fuscous colour with seven ocellar spots of black, the tips of which are rufous.





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PLATE XX.

PIPRA PUNCTATA

DOTTED OR SPECKLED MANAKIN.

PASSERES.

GENERIC CHARACTER.

Bill shorter than the head, strong, hard, nearly triangular at the base and slightly incurvate at the tip: nostrils naked. Feet gressorial: tail short.

SPECIFIC CHARACTER

AND

SYNONYMS.

Cinereous brown, beneath yellow: head, wings, and tail black with white dots: tail coverts red.

PIPRA PUNCTATA : *griseo fusca, subtus flava, capite alis caudaque nigris albo punctatis, tectricibus caudæ rubris.*

P

PLATE XX.

PIPRA PUNCTATA. Greyish brown, waved with dusky: top of the head and wings black speckled with white; tail coverts red. **SPECKLED MANAKIN.** *Nat. Miscell.* 111.

PARDALOTUS (punctatus) Vieillot. *Ornith. Elem.* p. 31.

This pretty little species of Manakin is one among the number of those numerous acquisitions in the science of Natural History, for which the Naturalist is indebted to the prolific regions of Australasia. The very close affinity which it bears to the Gmelinian *Pipra Nævia*, a species described originally by Buffon under the title of *Fourmilier tacheté de Cayenne*, may possibly have occasioned some confusion among authors respecting this individual species, but there are still, if we mistake not, sufficient indications of the two birds being specifically distinct. This was the opinion of the late Dr. Shaw: he constituted a new species of the bird before us under the name of **PIPRA PUNCTATA**, and the english trivial of **SPECKLED MANAKIN**, and we are induced to follow that example from a persuasion that his conclusion was correct. *Pipra Nævia*, to which it is so nearly allied, has the throat and chin black, and the breast spotted with black: *Pipra Punctata*, on the contrary, has the throat and breast yellow, without any black spots. These differences afford a conspicuous distinction of the two birds, besides which, there are some others of less consideration that will appear upon an attentive comparison.

As a new species, it appears, therefore, pretty certain that we have to acknowledge the late Dr. Shaw as the first author by whom

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this interesting bird was introduced to the knowledge of the learned world: he describes it, as before observed, under the name of *Pipra punctata*. M. Vieillot is consequently in an error when he refers to authority of Dr. Latham for this name. The bird was so designated in the first instance, in the work entitled the *Naturalist's Miscellany*, written by Dr. Shaw; nor was the species mentioned by Dr. Latham either in his *Synopsis* or his *Index Ornithologicus*. In a final or second supplement published by Dr. Latham long after the *Synopsis*, we find the bird mentioned under the name of the *Speckled Manakin*, but only upon the authority of the *Naturalist's Miscellany* of Shaw, and a drawing of the bird by General Davies, for at that late period even, the bird appears to be unknown to Dr. Latham, except upon those two authorities. This observation is the more material since the Ornithologist M. Vieillot in dividing the Linnæan Genus *Pipra* into two Genera, *Pardalotus* and *Pipra*, assigns for the type of his genus **PARDALOTUS** the "*Pipra punctata*" of Latham, at the same time, as we have already shewn, the works of Dr. Latham affords us no such name. The present species was described under the appellation of *Pipra punctata* only by Dr. Shaw. Dr. Latham does not adopt this name, he records the species only under the trivial English name of the Speckled Manakin, which name had also been assigned before by Dr. Shaw. If, therefore, the name of *Pipra punctata* had occurred to M. Vieillot, it must have been in the work of Dr. Shaw, and not of Dr. Latham. Perhaps Vieillot had inadvertently imagined this Speckled Manakin to be the same as the Spotted Manakin of Dr. Latham's *Synopsis*. If this be really the source of error, it may be added, that this latter bird appears to have been described by Dr. Latham upon the authority only of *Planches Enluminées*, and is no other than *Pipra Nævia* of Gmelin, as Dr. Latham has himself pointed out in his *Index Ornithologicus*.

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The description of this bird, as it occurs in the first instance, in the works of Dr. Shaw, is to this effect. **PIPRA PUNCTATA (SPECKLED MANAKIN)** *grisea, fusco undulata, vertice alisque nigris, albo punctatis tectricibus caudæ rubris.* The notice of the species as before-mentioned in Dr. Latham's second Supplement is subsequent to this, and appears only under the trivial name of the Speckled Manakin.

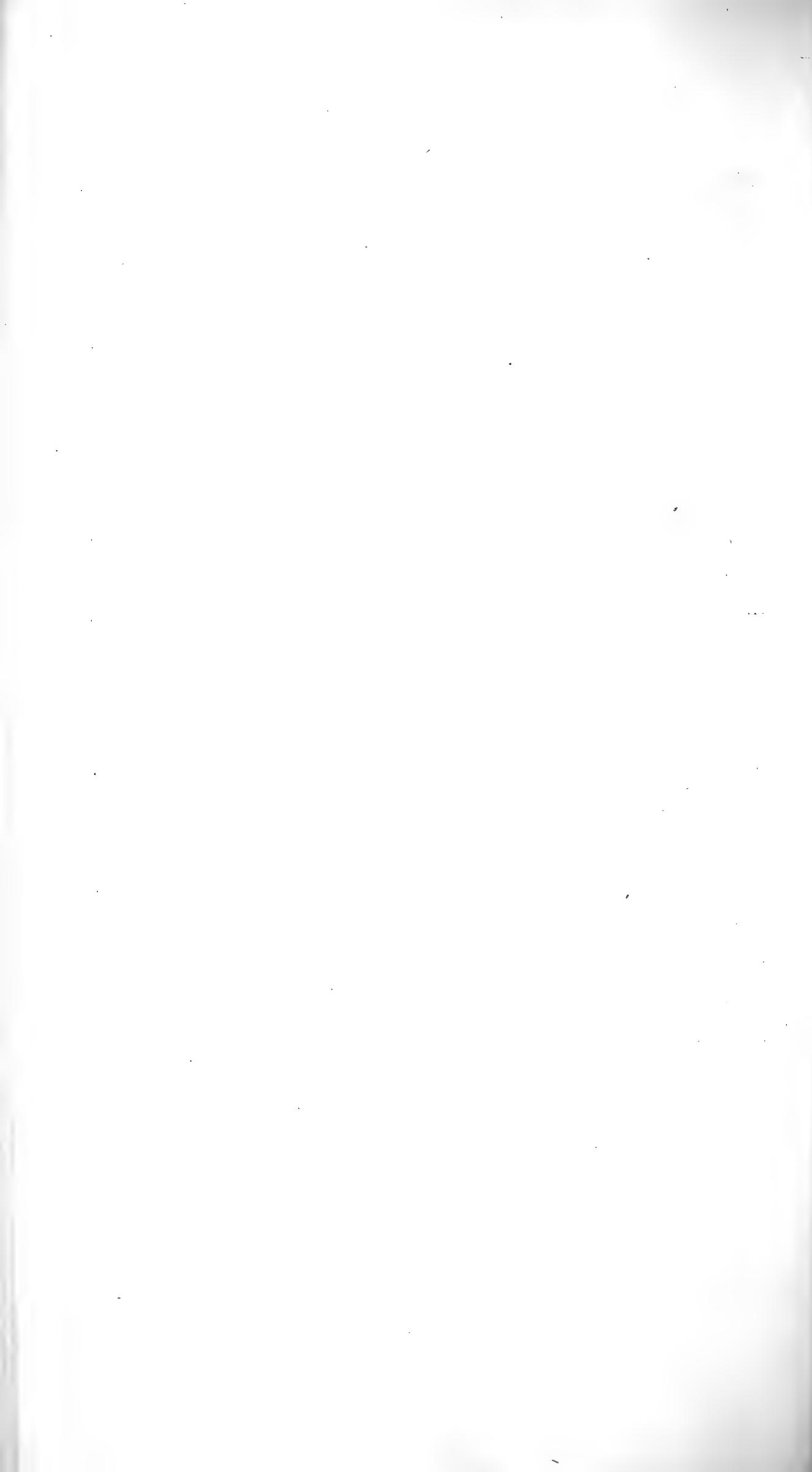
In adverting to the separation of the Pipra genus as it occurs in the work of M. Vieillot, it will not be amiss to point out precisely those distinctions, which, according to his mode of classification, constitute the characters of those two genera into which he has divided them. The first of these genera denominated **PARDALOTUS** comprehends those species of the Pipra genus in which the form of the bill is very short in proportion to its length, a little robust or stout, the base dilated upon the edges, entire, conoid, thick at the point, the upper mandible a little bent, and the lower one convex beneath. Those birds which are allowed to remain in the Pipra genus have the bill conoid, trigonal at the base, compressed at the sides near the end, cut off and curved at the point, the lower mandible turning up at the extremity; and the exterior toes connected rather beyond the middle. It may be added, finally, that Cuvier, on the contrary, in his *Regne Animal*, allows the Manakins (Pipra of Linnæus) to remain united as before. He does not adopt the genus Pardalotus, and this circumstance is the more worthy of note since we have seen the species arranged in our Museums with the synonymous appellation of "**PARDALOTUS PUNCTATUS Cuvier**," and have observed it designated as the type of Cuvier's New Genus Pardalotus.

This interesting little creature being represented in its natural size in the plate annexed, it will be perceived to be one of the smaller

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tribes of the feathered race : we have even few birds in England more diminutive, for in point of magnitude it does not exceed that of our common willow-wren, its length being only about four inches. The elegance of its plumage, is, however, in a peculiar degree attractive, and more than amply compensates for this inferiority in size. The general colour above is cinereous brown, varying to a cinereous purple ; the throat and breast a delicate fulvous yellow ; the crown of the head black spotted with white ; the wings, except the coverts, which are the same colour as the back, are black, and the tip of each of these black feathers are marked with a spot of white. The rump coverts are testaceous, becoming gradually redder towards the end : the tail itself is black, having the base of a fine crimson with some intermixture of yellow ; and in general, though not invariably, there is a white dot at the tip of each of the tail feathers ; sometimes it is only the outer feather on each side the tail that is marked with a white dot. Beneath, the throat and breast is of a delicate yellow colour ; the bill black, and legs brown.

In the plate that accompanies this description, this elegant little bird appears perched upon a sprig of the *ovate leaved Goodenia*, **GOODENIA OVATA**, a vegetable production of the Australasian regions, that flowered in the month of July, during the present year, in the Royal Gardens, Kew.





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PLATE XXI.

VOLUTA PYRUM

PEAR VOLUTE.

Front View.

UNIVALVE.

GENERIC CHARACTER.

Spiral; aperture without a beak, and somewhat effuse; pillar twisted or plaited, generally without lips or perforation.

**** FUSIFORM.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell obovate and slightly tailed with striated whorls on the spire: tip produced and glabrous: pillar with three plaits.

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VOLUTA PYRUM: testa obovata subcaudati; spiræ anfractibus striatis; apice producto glaberrimo, columella triplicata.—*Gmel. Linn. Syst. Nat. T. 1. p. 6. 3463. 102.*—*List. Conch. t. 815. f. 25.*—*Bonann. recr et Mus. Kircher. 3. f. 194.*—*Knorr. Vergn. 6. f. 39. f. 1.*—*Gualt. test. t. 46. f. C.*—*Martini. Conch. 3. t. 95. f. 916. 917.*—(B.) *List. Conch. t. 816. f. 26.*—*Martini. Conch. 3. t. 95. f. 918. 919.*—*Knorr. Vergn. 6. t. 27. f. 2.*—(D.) *Chemn. Conch. 9. t. 104. f. 884. 885.*—(8.) *Chemn. Conch. 9. t. 104. f. 886. 887.*

The animal inhabitant of this shell, according to the generical definition of Linnæus, is a kind of *Limax*; the *Limax* is one of the *Mollusca* Tribe, or animals furnished with limbs; the mouth is placed before, it has a lateral perforation, the feelers are four in number, and the vent common with the lateral pore. This is the Linnæan character of the animal inhabitant of the *Voluta* Genus, and consequently of the species now before us.

It is not to be disputed that the discoveries which have taken place among the vermes of those testaceous bodies since the time of Linnæus, have introduced us to a far more extensive acquaintance with the beings of this nature than Linnæus could have possessed. The term *Limax*, which Linnæus applied not only to the animal inhabitants of the *Voluta* family, but also to the *Buccinum*, the *Strombus*, the *Murex*, the *Trochus*, the *Turbo*, in short to almost every genus of the *Univalves*, and some even of the *Bivalves* could

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not fail to excite remark. It could scarcely be conceived that in the very ample range of the creation which those genera embraced, such uniformity could prevail, and the subsequent observations of various Naturalists have tended fully to assure us that the Linnæan character of the animal inhabitants of the testaceous tribes was much too vague and comprehensive. There are indeed, it must be confessed, a considerable number of those testaceous bodies, the animals of which are still unknown, and may possibly so remain, but forming our conclusions, from the great multitude that has been recently discovered, and the number of those which have been examined with anatomical attention, we may presume, with safety, that the Linnæan Limaces ought properly to be divided into several distinct genera. How far a methodical distribution of the shells themselves, founded upon the zoological distinctions of the animal inhabitants, may be admissible in our cabinets appears less certain. The greater number of those shells, of which the animals are totally unknown, present insuperable objections; and the attention of collectors in the formation of the Conchological Cabinet, so rarely extend beyond the more obvious characters which the structure of the shells present, that we can scarcely deem it practicable.

The animal of the shell before us, *Voluta pyrum*, has been ascertained and well described by Lamark, De Montfort, and other writers; it has the head armed with two obtuse feelers of a club-like form; the eyes advanced and placed at the base, at the outerside of those feelers; the mantle or fleshy covering terminating in an elongation folded into a kind of tube above the head; the foot, or disk, strong and muscular, and armed with a small round horny operculum.

According to the Linnæan classification, the shelly covering of this animal is a *Voluta*; and so far as the most prominent criterion of

PLATE XXI.

the *Voluta* genus, the folds or plaits upon the pillar lip be considered, this character is unequivocal. Linnæus regarding this as one of its most essential definitions, has overlooked the differences that prevail in the structure of the spire and beaks, or includes them only as distinctions of the different families into which his *Volutæ* are divided. Later writers differ upon this subject ; these differences are considered by many as generical, and thus the Linnæan *Volutæ* have become separated into several distinct genera. In the shell before us, the beak is lengthened or produced, and canaliculated ; and thus constitutes in the classification of Lamark, a species of his **TURBINELLA** ; and is the shell in particular which he adopts as the type of that genus. The character of that genus, as proposed by this Conchologist, in his work entitled *Animaux sans vertebres*, is thus expressed, *Turbinelle* (*Turbinella*) a shell turbinated or subfusiform, canaliculated to the base, and having upon the column from three to five plaits or folds of a compressed form and placed transversely. *Murex scolymus* of Martini, *Voluta ceramica* of Lister, and *Voluta capitellum* of the same author, are comprehended with the Linnæan *Voluta pyrum* in this genus *Turbinellus*.

It has been observed by De Montfort that Lamark has made a group of those shells which accord with the above character, and which he himself adopts with some small variations : according to this writer, the genus *Turbinelle*, of which our *Voluta Pyrum* is considered as the type, has the shell heavy, univalve, with an obtuse spire ending in a nipple ; the mouth sloping and lengthened ; the pillar denticulated with large equal folds or plaits, the outer lip strait and cut off, and the base lengthened.

After all the pains, however, which Lamark and other Continental Naturalists have taken to establish the genus *Turbinella*,

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Cuvier in his *Regne Animal* observes that the shells of this genus differ in no other respect from the Conic *Volutes* than in the prolongation of their opening, forming a kind of canal, and adding that it is not easy to trace the limits between the one and the other.

We have experienced some surprise in observing that while so much attention has been bestowed by writers upon the generical distinctions of *Voluta Pyrum*, the differences that prevail in its presumed varieties have almost entirely escaped attention. It should be remarked that in the Gmelinian constitution of this species there are no less than four distinct varieties, all which, according to Gmelin, and subsequently to other writers, appertain to the Linnæan species *Pyrum*. From the synonymous references which Lamark has brought together in one view, it is obvious that his opinion is the same; his **TURBINELLA PYRUM**, which is the same as the Linnæan *Voluta Pyrum*, will be observed to comprehend the several presumed varieties of the species to be found in the works of Martini and Chemnitz, and the same is again observable in the works of Denys de Montfort. There are, however, some Conchologists in England who do not agree in this particular, for they constitute at least three distinct species of the presumed varieties of *Voluta Pyrum*. This division of the species was first proposed by Dr. Solander, and has been subsequently adopted in several of our English Cabinets. As the particulars of this arrangement may not prove unacceptable, we shall proceed to describe them.

To the *first* of these new species Dr. Solander retains the Linnæan name of **VOLUTA PYRUM**, it is that kind which has the beak elongated, and is known by the familiar name of the **LONG BEAKED TURNIP SHELL**. This is the *Voluta rostrata* of some

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Conchologists ; Rapum rostratum of the Colonnian Museum ; and inhabits the seas of Tranquebar.

As the preceding shell is distinguished by the name of the Long beaked Turnip Shell, in allusion to the elongated structure of the beak, there is another known by the appellation of the High Spired Turnip Shell, in reference to the greater elevation of its spire ; this is a *second* species of Solander, and is called by him **VOLUTA PONDEROSA** ; in the Calonnian Museum it stood under the name of Rapum productum. This shell inhabits the seas of Madagascar, and is the kind which becomes the more immediate object of our consideration as the subject of our present plate.

The *third* kind of Turnip Shell is from the straits of Malacca, a shell more ponderous than the preceding ; of a broader form and having the spire more depressed. This is the common Heavy Turnip Shell of our English Cabinet, *Voluta gravis* of Solander.

These distinctions proposed by the late Dr. Solander are found conformable, in a particular degree, with the classification observable in the cabinet of M. de Colonne. The shells of M. de Colonne, it appears, were thus arranged by the celebrated Conchologist M. Favanne. They have, nevertheless, we believe, passed unnoticed by any of the modern writers upon this subject. The distinctions are certainly obvious, and might probably fully authorize their separation into species : it must be at least admitted that as varieties of the same species they are strikingly distinct.

Having so far treated upon the generical distinctions of *Voluta Pyrum*, and pointed out the differences that exist among its principal

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supposed varieties, we arrive at another point of view in which the history of this shell becomes no less important, or less worthy of our consideration: the sacred character which from some superstitious causes, remote beyond all research of the present race of men, this shell has acquired in the Mythology of the Indian Nations: in the rites and worship of the Indian Brahma. Among these people this shell is called the **CHANK**, or **SACRED CHANK**, the emblem of an attribute of the divine power, and is constantly seen in one of the hands of the Indian Deity Vishnu, as a type of the renovation of the earth from the waters of the deluge.—The cause of this catastrophe of the earth, the deluge, they attribute to the wickedness of mankind in remote ages, which incensing the divine Brahma, he caused a flood of the waters to overflow the earth and destroy every vestige of the creation, animate and inanimate, that existed upon its surface. After awhile the supreme Brahma disposed to restore creation, commanded Vishnu to deliver the earth from the flood of waters, and in testimony of its deliverance Vishnu bears in his hand the Chank Shell, the symbol of its renovation.*

Without proceeding at any considerable length into the history of those mythological persuasions, it may be permitted to observe that as a type of the divine power in relieving the earth from the flood

* The Hindoos entertain the belief of a general deluge, not very dissimilar to that of the Mosaic records. They admit, however, many such catastrophes of the earth, and subsequent renovations through the creative power of this attribute of Brahma, which they denominate Vishnu. The Chank Shell refers to a deluge of the earth, anterior to that which seems to accord with the sacred writ. The deliverance of the earth from the Mosaic deluge they term the lotos creation, the type of which is the expanded flower of the lotos, the *indian pedma* emerging above the surface of the waters with Vishnu seated in its centre.

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of waters with which it was overwhelmed at the time of the deluge, this shell is held among the Indians of the Brahma persuasion as one of the most sacred emblems of that figurative divinity; and this religion, it will be remembered, extends over no small portion of India and China, and even to part of Russia and Tartary. Vishnu, as one of the three attributes or triad of Brahma, almost invariably appears with this symbol in his hand. Whether in their paintings, sculptures, or carvings, or in the sacred paraphernalia of their temples, the Chank-shell is the customary type of their deity Vishnu, and sometimes it occurs in the hands of the inferior deities,* to whom Vishnu

* Were it requisite to treat more amply upon this subject, it would be in our power to produce abundant evidence of the prevalence of this symbol of the sacred Volute, wherever Vishnu or his delegated power appears. The rich repository of the India House, the British Museum, and many private collections afford us some examples of the most interesting kind. Some few of these are so immediately connected with the object of our enquiry, that we feel persuaded no apology will be necessary for their introduction.

In the collection of Lord Valentia is a four-sided cast in brass, resembling a kind of pyramid, consisting of three low platforms, each bearing idols, and surmounted at the summit by a tortoise. In several Indian paintings mythologically adverting to the subject of the creation, the tortoise is represented raising the new-born earth upon its back above the waters, and it is usually seen in other mythological paintings of the same subject bearing the throne upon which Vishnu is seated, while the attendants, personified by various beings, are lifting the earth from the deep. Such a painting was once in the celebrated collection of Colonel Stuart: and we need no other evidence to shew that the bronze of Lord Valentia's collection is of the same mythological nature, and referable to the deluge, than to observe the Chank Shell placed at each of the four corners of the ornament. We may comprehend the allusion of the tortoise raising the earth from the waters of the deluge, from a trait of the ancient Chinese astronomy; by the tortoise bearing the earth, they intended the north pole of the ecliptic, which, at the time of the deluge, they maintained had not materially changed its position, and that by this means the world was sustained and saved from utter annihilation.

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is imagined to have confided a portion of his power. If the Chank be the object of their devotion in health, so also it is the object of their superstitions in sickness and in death. The medicine administered by the Priest to his patient in the time of illness, from the spout of one of these shells, is considered of greater efficacy than if taken from any other drinking vessel; that from the spout of a reversed shell has a reputation inestimable. These reversed shells occur so rarely, that if at any time some happy fortunate of the fishing tribe of Hindoos should be so lucky as to find one, he is indeed considered

An Indian painting, mentioned by Mr. Edward Moor, the author of the Hindoo Pantheon, presents us with another deity, Sivi, who holds the Chank Shell in one of his four hands, and the antelope (moon) in another.

There is also an Indian painting of Devi, who appears holding a Chank Shell, furnished on each side with a lateral lappit or wing: this symbol he holds in one hand, and the wheel, the emblem of the universe, in the other; and in a bronze of Vishnu, in the India House, we find the Chank Shell ornamented in a similar manner.

We have seen another Indian painting, in which, not only the Chank Shell is furnished on each side with alæ, or wings, but an expanded flower of six petals is placed upon its pinnacle. This shell, if we may judge from its outline, is of that kind which has the spire depressed. Lord Valentia is in possession of a bronze cast, in which Vishnu appears reclined upon his couch of serpents, attended by *Lakshmi* and *Satyavama*, (eternity) in which the shell is also winged, and appears to be of that kind in which the beak is elongated or produced; and if this conjecture be correct, it will appear that the Hindoos venerate indiscriminately, and probably as the same shell, each of those three varieties of *Voluta Pyrum*, which we have mentioned in another part of this description. Our limits will only permit us to observe that we believe we may add with some degree of certainty, that the reversed shell, the more immediate object of our present dissertation, may sometimes appear also: there is in the temple of *Visweswara*, at Benares, a sculpture of Surya, the Indian personification of the sun, seated in his chariot driven by Aruna, in which the *Chank Shell* held in his right hand appears to have the aperture on the left side instead of the right, as in the usual growth of the shell. If this be not an oversight of the copyist (*Mr. Moor*) the circumstance deserves peculiar notice.

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as a mortal favoured by their divinity Vishnu ; this treasure of the deep is immediately deposited in one of their pagodas, to the great honour and happiness of the discoverer. A dose of medicine from such a shell is deemed infallible, if the malady of the patient be within the art of medicine to cure ; for if this should fail, they rest persuaded nothing else can save the patient from the death awaiting him.

As these reversed shells are of very rare occurrence, the price they bear is of course of considerable. Very few of the Pagodas possess such an inestimable treasure as a *Chank reversed*, they will command a price in Asia surpassing infinitely any idea that might probably be formed upon the subject. Four or five hundred dollars have been given in China, among the worshippers of Brahma, for a shell of this kind. In India they have been known to produce from one hundred to two hundred rupees, sometimes, three, four, or five hundred rupees, or perhaps a larger sum. The shells of this kind, which are purchased from the natives and brought to Europe, it may be imagined, for this reason, can have been obtained only at a considerable cost. It was principally through the unrivalled liberality of the Conchologists of the low countries, about the beginning of the last century, that the cabinets of Europe became possessed of these rarities, and they still remain extremely scarce.

Only two examples of those reversed shells have occurred to our observation : both were of that kind in which the spire is elongated ; the high spired Turnip Shell of the English cabinets. One of these reversed shells we saw in the year 1797, in the celebrated collection of Mon de Calonne, ci-devant Minister of France, and which passed, at a considerable price, into the collection of the Earl of Tankerville.

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The other occurred in the late Leverian Museum, which was distributed by public auction, in the year 1806. This last-mentioned shell was in a less perfect condition than might be wished; it was worn and mutilated, and for this reason did not obtain by any means such a price as was expected from its rarity: it produced only *seven guineas*, a sum considered much beneath its real value, even in its injured state.* In the month of April, in the year 1815, the same shell appeared in the sale of certain effects, the property of the Duke de Bourbon, at his residence in Great Ormond Street, Portman Square, where it was sold, we believe, at an advanced price. It is the figure of this last-mentioned shell that appears in the present plate. We have delineated the specimen with all faults for the sake of greater accuracy, and from a persuasion that the Naturalist would prefer a correct representation from an undoubted original, to any figure in which its actual defects might have been amended by the pencil of the artist. The shell is depicted in its natural size, and it will hence appear, is little inferior in point of magnitude to the generality of those shells of the same species which are not of the reversed kind. The species is sometimes known to grow to the length of seven or eight inches, but such examples are not common. Of the reversed kinds the Leverian specimen, as it has been emphatically denominated, is probably one of the largest known.

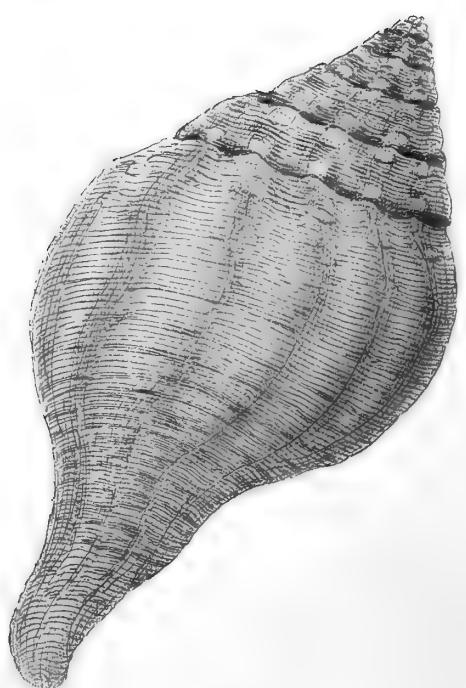
The smaller figure in the lower part of our plate is a representation of the same species in its usual form, and appears clothed or covered with the thick filmy epidermis, of a brown colour, with which

* Vide Catalogue *Lev. Mus.* "Last day, July 12th, 1806, lot 77. *The reversed variety of the High Spired Turnip, from Madagascar, extremely rare. £7. 7s.*" p. 15.

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the shell is naturally covered when in a living state. From this figure it will be perceived that the direction of the spiral wreath or whorls in the larger shell is exactly reversed, and that the mouth or aperture of the shell, which in the smaller figure appears on the right side, is seen in the reversed shell on the left. Thus upon the least comparison of the two figures, the true character of the reversed shell will be distinctly perceived.

We should not omit to mention that the smaller figure which represents the unreversed shell would appear of the same pallid hue as the reversed shell, upon the removal of the epidermis with which it is enveloped. Sometimes, however, when this common kind is particularly fine, the exterior surface is delicately tinged with a less pallid hue, and the pillar lip and opening yellowish, inclined to flesh colour. That particular kind or variety which in England is denominated the low spired or heavy Turnip Shell, is sometimes pleasingly diversified with more vivid tints, and the younger shells occasionally spotted with brown, upon a ground tinged with yellowish or buff colour. We have no knowledge of any reversed shell of this latter kind, excepting one which is in the Museum at Copenhagen.



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PLATE XXII.

VOLUTA PYRUM

PEAR VOLUTE.

Back View.

UNIVALVE.

GENERIC CHARACTER.

Spiral; aperture without a beak, and somewhat effuse: pillar twisted or plaited, generally without lips or perforation.

**** FUSIFORM.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell obovate and slightly tailed with striated whorls on the spire: tip produced and glabrous: pillar with three plaits.

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VOLUTA PYRUM: testa obovata subcaudata spiræ anfractibus striatis; apice producto glaberrimo, columella triplicata.—*Gmel. Syst. Nat. T. 1. p. 6. 8463. 102.*

In the preceding plate (plate 21) we have introduced to the attention of our readers a figure of that truly interesting rarity the reversed Voluta Pyrum, or Pear Volute, or as it is better known in the familiar language of the English collectors by the appellation of the High spired Turnip Shell. The figure there delineated exhibits a frontal view of this shell, in which the characteristic aperture of the mouth is displayed to advantage. And in order that nothing on our part may be wanting to complete our observations on this very valuable curiosity, we have been induced to insert in the present instance, a back or posterior view of the same shell.

We have already entered so fully into the history of this shell in the description of the former plate, as to render it, we may presume, superfluous to dwell upon this subject further in the present instance. Our figure of the reversed shell, as in the former plate, is accompanied by a posterior view of a shell of the usual growth, (covered with its natural epidermis) and by the assistance of this figure, the contrary direction of the spiral wreath in the reversed shell becomes at once too obviously striking to escape attention.



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PLATE XXIII.

TANAGRA TRICOLOR TRICOLOURED TANGER var β .

PASSERES.

GENERIC CHARACTER.

Bill conic, pointed, notched, nearly triangular at the base, a little inclining at the tip.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shining green, beneath yellowish green; wing coverts violet: frontlet and upper part of the back black.

Var β . Crown and chin violet: neck, and sometimes rump, orange.

TANAGRA TRICOLOR: *viridis splendens, subtus viridi-flavescens, tetricibus alarum violaceis, capirostro dorsoque superiore nigris uropygio fulvo.* *Lath. Ind. Orn.* 428. 29.

TANAGRA TRICOLOR β . *Tangara cayanensis varia cyanocephalos.*
Briss. Sup. p. 62. t. 4. f. 2.

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TANAGRA TRICOLOR: *viridis, capite, mento, jugulo et pectore pallide thalassinis capistro nigro, cervice collique lateribus viridi-aureis, gulæ macula magna dorsoque nigris, pectoris fascia cœrulea, abdomine crisoque ex flavicante viridibus.* *Gmel. T. 1. p. 2. 891.*

TANGARA varié à tête verte de Cayenne.—*Buff. Pl. Enl. n. 33. f. 1.*

β TANGARA varié à tête bleue de Cayenne.—*Buff. Pl. Enl. n. 33. f. 2.*

The history of this splendid species of Tanager is unknown to Naturalists: we are aware only, that independently of the varieties arising from its different states of plumage, there are two pretty distinct and accurately defined varieties, one of which has the head of a fine green, the other of a rich blue. Some authors consider these two birds as specifically different, while others are as well assured they are the same. Dr. Latham observes that these birds are, without doubt, the same, differing only in sex, but which of them is the male is not ascertained. Some of the French writers, among whom is Vieillot, express a different opinion, for they assure us neither the female or the young are known, and they further add, that in the Brazils this bird is common, while in Guiana it is rare. Vieillot once regarded them as distinct species, but has subsequently described them as the same. Both birds, according to Dr. Latham, are from Cayenne; we have seen both kinds from the Brazils.

The size of this bird is that of the house sparrow: the rump is usually green, but in the blue headed variety, is sometimes flavous, more or less inclined to orange.





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PLATE XXIV.

PAPILIO THERSITES THERSITES BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob : wings erect when at rest. Fly by day.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings tailed and yellow : border black : lower ones with yellow lunules.

PAPILIO THERSITES : alis caudatis flavis : limbo nigro, posticis lunulis flavis. *Fabr. Ent. Syst. T. 3. p. 1. 88.*

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We may venture to affirm, with every degree of certainty, that there is no figure of this very beautiful species, extant, in the work of any previous author. Fabricius described it as a new species, under the name of *Papilio Thersites* ; his description refers to a specimen in the cabinet of Dr. Hunter, but he has omitted to insert his usual reference to the drawings of Mr. Jones, among which that specimen was delineated, and from which we are well aware the Fabrician description of the species is derived. It is from those drawings, also, that we have been enabled to determine the species with perfect accuracy.

The magnitude of this *Papilio* renders it an object of peculiar interest ; it is one of the most conspicuous insects of its tribe, and in point of elegance cannot assuredly be considered inferior to any of its numerous species. In the plate accompanying this description, the *Papilio* is represented in its natural size : the whole disk is of a fine yellow colour, with a deep black border : the posterior wings are marked with a series of yellow lunules, and another of brilliant blue spots, composed of little shining dots, of which the brightest are in the centre. Beneath, the breast, abdomen, and wings, are yellow : margin of the anterior pair black with a yellow streak, and a black streak of spots on the lower pair.





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PLATE XXV.

TROCHILUS ORNATUS

TUFTED-NECK HUMMING BIRD.

ORDER

PICÆ.

GENERIC CHARACTER.

Bill subulate or awl-shaped; filiform, tubular at the tip, longer than the head: upper mandible forming a sheath for the lower. Tongue filiform, the two threads coalescing and tubular: feet formed for walking: tail composed of ten feathers in general.

** Bill straight.

SPECIFIC CHARACTER

AND

SYNONYMS.

Golden green, beneath glossy brown, crest rufous; and on each side, below the ears, a tuft of elongated rufous feathers with a green spot at the tip of each.

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TROCHILUS ORNATUS : viridi aureus, subtus-nitente fuscus crista rufo : infra aures utrinque pennis elongatis rufis apice macula viridi.

TROCHILUS ORNATUS : viridi-aureus, subtus nitente-fuscus, fascia uropygio alba, crista (in mare) verticis et fasciculo pennarum infra aures utrinque rufo.—*Gmel. Linn.*
Syst. Nat. T. 1. p. 497. n. 58.

TROCHILUS ORNATUS : viridi-aureus subtus fusco-aureus, crista rufa abdomine infimo vitta transversa uropygii albis, infra aures utrinque pennis 6 s. 7 elongatis rufis apice macula viridi.—*Lath. Ind. Orn.*
318. 58.

Hupecol *Buff. Hist. Nat. des Ois.* 6. p. 18.

Oiseau Mouche, dit Hupecol de Cayenne.—*Buff. Pl. enl. n. 640. f. 3.*

TUFTED-NECKED HUMMING BIRD.—*Lath. Gen. Syn. 2 p. 784. 55.*

The Tufted-Neck Humming Bird described by Buffon under the name of *l'Oiseau-Mouche de Cayenne*, *Le Hupecol de Cayenne*, differs in no respect that we perceive from the bird before us; and for this reason we can have no hesitation in considering it as an individual of the same species. Our specimen is not from Cayenne, it was brought from New Zealand, and was one among the number of those varieties collected in that island by the celebrated Navigator

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Captain Cook, in his first voyage round the world: that in which he was accompanied by Sir Joseph Banks, and Dr. Solander. The New Zealand specimen, though it nearly accords with the bird described by Buffon under the name of *Hupecol de Cayenne*, does not entirely agree with the description given of that species by Dr. Latham: it differs in wanting the white band on the rump, and the patch or space of the same colour on the lower region of the belly. Buffon speaks of such a characteristic mark of white on the rump, but not the abdomen of the Cayenne kind.* And it is not unlikely that these appearances may be indications only of a change in plumage, as the same circumstance is not unfrequently observed in many other birds at particular seasons, or in certain states of moulting. Dr. Latham himself observes that in the female these marks, instead of being white, incline to rufous, and this, no doubt, in the adult bird. There is certainly no appearance of white either upon the rump or region of the belly in the bird before us; and this example bears every appearance of having arrived at its full maturity of plumage. Perhaps the bird from Cayenne having a white band on the rump and abdomen, may be, however, if not a distinct variety, the more mature bird of the same species as that met with by our circumnavigators at New Zealand.

There are species of this tribe more brilliant in colour and more richly varied in the disposition of those colours, but assuredly none more singular or pleasing in general aspect than the bird before us. In point of size the Tufted Humming Bird is one of the smallest species of its family, scarcely exceeding in that respect the figure delineated in

* "Le dessus du corps est d'un vert-sombre, qui jette quelques reflets dorés: les parties inferieures ne presentent que des couleurs rembrunies."

Buffon.

PLATE XXV.

the plate, for its total length is not above three inches, and its bulk proportionate. The head and upper part of the body, and also the wings above, are green with a golden lustre; the tail greenish, changeable to testaceous golden brown, and having the inner webs rufous. The throat is of a fine green colour, variable in different lights to a golden hue with a yellow or a brown metallic lustre, and below that the whole of the belly is a rich brown glossed with green and golden. On the head of the male bird is a crest of pointed feathers of an orange or testaceous brown colour, and on each side of the neck a tuft composed of elongated feathers, differing in length, and having the tips of a dark but brilliant green. These feathers the little creature has the power of raising or depressing at pleasure: when these are displayed in full array on each side of the green patch on the front of the neck, and the crest stands erect, which is invariably the case when the bird is offended or surprised, the appearance of this bird is altogether remarkable. The female has neither the ruff on the neck nor the crest, and its colours are in general more obscure than in the male. The bill is of a moderate length and straight, the legs very short and the feet diminutive.*

In the annexed plate this elegant little bird is seen perched upon a tuft of the

JACQUINIA AURANTIA, THE AUSTRALASIAN ORANGE JACQUINIA,

in blossom; a plant that inhabits the New Holland and New Zealand, and which flowered in the month of July in the present year, at Kew.

* A New Zealand specimen of this rare bird, lot 6286, sold for the sum of £2 10s. in the Leverian sale.



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PLATE XXVI.

TURBO SCALARIS

WENTLETRAP.

ORDER

UNIVALVE.

GENERIC CHARACTER.

Shell spiral, solid : aperture contracted, obicular, entire.

* *Umbilicate, or Perforated.*

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell conic, pale fulvous with white ribs, whorls distant.

TURBO SCALARIS : *testa conica, pallide fulva costis albis anfractibus distantibus.*

PLATE XXVI.

TURBO SCALARIS: testa cancellata conica: anfractibus distantibus.—

Linn. Syst. Nat. 10 p. 764. n. 548.—Mus. Lud. Ulr. 658. n. 351.—Gmel. Linn. Syst. Nat. T. 1. p. 6. 3603. n. 62.

SCALARIA PRETIOSA: testâ conicâ, umbilicatâ inspiram laxam contortâ, pallidè fulva; costis albis; anfractibus disjunctis, lævibus: ultimo ventricoso.—*Lamarck Anim. sans. vertebr. 6. p. 2. 226. 1.*

Wentletrap (scalaris).—*Rumpf. mus. t. 49. fig. A.—Argenville Conch. pl. 11. fig. V.—Gualt. tab. 10. fig. 2. 7.*

The Wentletrap is one of those extraordinary productions of the shell tribe that has been regarded with unabated admiration among Conchologists from the days of Petiver and Rumpfius, the earliest of the more recent race of Naturalists, down to the period in which we live. And, although it does not at this time bear a price so very great as that which it bore some years ago, it is yet considered as a shell of no mean value when it is large and in fine perfection: even those of a smaller size, when in good condition, are esteemed of value, at least in some proportion to those more estimable for their perfection.

The rarity of this choice and very curious shell arises from various causes. In the Chinese seas, which it chiefly inhabits, the species is very rare; it sometimes occurs upon the coasts of Coromandel, but sparingly, and in the other seas upon the coasts of India

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it is believed to be still more uncommon. These shells are, moreover, so very brittle that they seldom occur perfect, and more especially the larger ones, which in almost every instance is abbreviated or imperfect at the point or apex. And, it may be also added that like *Voluta Pyrum*, the *Sacred Chank Shell*, of which an explanation was given in a former plate, the Wentletrap is one of the sacred shells of the worshippers of Brahma, and consequently when found in fine condition, is sure to obtain a considerable price among the opulent devotees of that doctrine, the prevailing worship of the many millions of inhabitants that people India, China, and other vast regions of the continent of Asia. In China, shells of this kind, of a moderate size, are valued at from four to five, or even ten dollars a piece, those are shells of about an inch and a quarter in length, and such as exceed that size are considered in proportion valuable. In England a fine specimen about the same size last mentioned would be estimated in worth at little less than five guineas. The celebrated Wentletrap of the Leverian Museum was about two inches long, but as it exhibited little freshness of colour, it produced only eleven pounds. Since that period another specimen, a trifle larger, and with the same bleached or depauperated appearance in its tints of colour, was sold at the public hammer for twenty seven pounds. This is the highest price we have seen paid for a specimen of this curious shell : we have heard of fifty guineas being given by one collector for a shell of this kind. Considerable as this price may be deemed, it appears to have been exceeded in one, if not more instances, upon the continent. Denys de Montfort, speaking, as it may be presumed, of the low countries and France, informs us, that he has seen it sell, when the height or length has exceeded two inches, at two thousand four hundred livres, or one hundred Louis. It will be observed that he is alluding to shells about the same size as that delineated in the

PLATE XXVI.

annexed plate, the outline of which is from the Leverian specimen ; the colouring amended from a smaller but more recent shell.

These shells are of such a tender nature, and their colours so evanescent or so feebly fixed, that they almost constantly present a mutilated and bleached appearance. This is not, however, uniformly the case ; we have very recently had an opportunity of inspecting several specimens of a moderate size, that were brought from China, and from these we perceive that the Wentletrap, when in fine order, is of a pale testaceous or rather fulvous hue ; and inclining sometimes to yellowish. In some few specimens the ground colour of the shell, instead of being uniform, appears sprinkled with pallid spots and dots of a rounded form. Sometimes we are assured the colour inclines to rufous, or a reddish tint. Lamarck has this shell of a pale fulvous colour, with the ribs as usual, white, for he adopts this as part of the leading character of the species ; his expression is "*pallide fulva ; costis albis.*"

The animal inhabitant of this shell has the head armed with two feelers, each ending in a setaceous thread or hair : the eye is placed upon the tentacula at the base of this thread or hair, and it has also a kind of trunk at the mouth, by means of which it searches for its food amongst the sand and weeds. It is supposed to be of a carnivorous nature, subsisting on other marine worms. It is considered rather as a littoral species, frequenting the little sandy bays and creeks among the breakers upon the lower parts of the sea shore, and is to be sought for with the most probability of success among the sea weeds or fuci that grow in the pools of water lying in these sunken rocks, because in such situations it is most likely to find protection against the intrusion of the boisterous element.

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Occasionally it is seen, though rarely, crawling on the sands at low water.

In a natural classification of the shell tribe, should we ever arrive at an arrangement of Conchology, so perfect as to deserve that epithet, it would be a task of some difficulty to fix the precise station of the Wentletrap; for in the order of nature it presents anomalies which cannot easily be reconciled, and few authors are agreed upon this subject even in the artificial arrangements which they have been induced to adopt. Thus Rumphius makes it a *Buccinum*, Davila a *Tuyau*, Argenville places it as a *Terebra* (vis) and De Montfort *Scalarus*. In the Encyclopædia it is denominated *Scalaria Pretiosa*, and this name Lamarck retains.

The name of Wentltrap, by which this shell is now so well known, is derived from the Dutch Language, and signifies according to the technical phraseology of the Dutch architects in building, a winding stair case, or flight of stairs turning spirally round a central column, into which one end of every step is mortised as they ascend from the base upwards. The term Wentletrap, Wenteltrap, or as the Dutch sometimes call it, Wendeltrap,* is the name given by Rumphius the Hollander to this shell, as a synonymous name with his latin term *Scalare*. It is an allusion, somewhat fanciful we must allow, to the disposition of the costal ridges upon this shell, and which when viewed laterally as they traverse or pass over the upper convexity of the whorls on each side, have the appearance of a flight of steps turning spirally round the body of the shell, just as a winding staircase would

* *Wenteltrap*, *Wendeltrap*, Rondom gaande trap, met canspil daar al de trappen in schroeven. *Marin.*

PLATE XXVI.

be carried spirally round a cone or sub-cylindrical body. The singularity of this species (for it is not a peculiarity or character even of the new genus *Scalaria* as established by Lamarck and Cuvier) consists in having the whole whorl of the shell, from the mouth to the summit, entirely unconnected, while in spiral shells the suture of the whorls is united throughout. The tube is perfectly detached from the mouth to the apex, and the whorls linked together only by means of the longitudinal ribs which traverse the tube at regular intervals, so that the only connexion of the whorls is at the junction of those ribs, which touching each other unite at that part which in regular spiral shells that have the whorls united, would be denominated the suture of the whorls.

Considering the very zealous propensity of some French Naturalists of the present day, and of their admirers in England, to create new genera upon every slight occasion, it becomes a matter of some astonishment that a character so very obvious as the disjunction of the tube from the aperture to the very summit should not have laid the foundation of a new genus, for the reception of this shell. Lamarck, however, places it at the head of his *Scalaires*, and one of the next species in succession is his *Scalaria Communis*, a shell perfectly well known by every Naturalist throughout Europe for nearly a century past under the name of *Turbo Clathratus*.* Nor is Lamarck singular in this very anomalous consolidation of shells so distant in this respect from each other; for Cuvier in his *Regne Animal*, after describing our present shell, the Linnæan *Turbo Scalaris*, as one of his *Scalaires*, and informing us it is distinguished by the whorls not touching each other, adds particularly that there is another species

* *Vide* Donovan's *British Shells*, Vol. I. plate 28.

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which has not that peculiarity, and that is the *Turbo Clathratus*. Nothing, however, can be more certain than that from this very circumstance these two shells are generically distinct from each other ; Clathratus may be retained with the Linnæan Turbines, but Scalaris has nearly, if not entirely as much claim to the *Serpula** as *Turbo* genus ; which cannot be said of *T. Clathratus*. We shall for this reason allow the Wentletrap to remain where Linnæus has placed it, namely, among the 'Turbines ; not perhaps without some hesitation, but if we did remove it, we should certainly prefer the institution of new genus for its reception, instead of wandering from one anomaly to another, as we must perceive would be the case in the present instance by following the example of Lamarck and Cuvier.

It may be lastly observed that the progressive growth of this extraordinary rarity may be determined by the greater number of the longitudinal ribs that pass over and surround the tube of the whorls, for at each increase the animal forms a new mouth to its shell : the new mouth as it is protruded and formed, appears like the former ones, entirely surrounded by a rim or ring, and it is these rings of

* *Serpula* Linn. *Vermicularus* *De Montf.* *Vermet* Adanson. The animal of the *Serpulæ*, it may be added further, does not differ, according to Cuvier, from those of the Linnæan Genus *Turbo*, and consequently not from *Scalaria* of Lamarck and Cuvier, as must be concluded from their admission of *Turbo Clathratus* among the number of its species, in an arrangement founded on the organization of the animal, as well as its testaceous habitation. Cuvier himself observes that the animal of the *Vermet*, and also the opening (of the shell) resemble those of the *Turbo*, but that the whorls do not touch, and are in part irregularly curved like the tubes of the *Serpulas*.—*Regne Animal* T. 2. 419. And his classification further shews the analogy of these tribes of shells, since the animal of the Linnæan *Turbo*, the *Vermet*s of Adanson, and *Scalaria* of Lamarck, are all of the same family, the *Gastéropodas Pectinibranches* of Cuvier.

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the mouths as they are formed in succession, that constitute the ribs which appear to traverse the shell as it is increased in length, and consequently in the number of its rings. Shells of a large size exhibit sometimes as many as fifty or sixty of such rings surrounding the tube or spire at regular intervals.





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PLATE XXVII.

FIGURE I.

PAPILIO ZACYNTHUS ZACYNTHUS'S BUTTERFLY.

ORDER

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob: wings erect when at rest. Fly by day.

* **EQUITES TROJANI.—*Fabr.***

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented, black: a spot on the anterior pair green and white: and one on the posterior wings palmated and sanguineous.

PLATE XXVII.

PAPILIO ZACYNTHUS: alis dentatis nigris: anticis macula viridi alba, posticis palmata sanguinea.—*Fabr. Ent. Syst. T. 3. p. 1. p. 15. n. 46.*

PAPILIO ZACYNTHUS.—*Jon. fig. pict. 1 tab. 22.*

It cannot fail to prove satisfactory to the Naturalist to be informed that we have the same sanction for presenting the annexed figure as that of the true **PAPILIO ZACYNTHUS** of *Fabricius*, as that to which we have several times adverted upon other similar occasions in the progress of the present publication, namely the handwriting of that celebrated Entomologist, inscribed upon the original drawings of Mr. Jones. This is indeed a circumstance to which we cannot advert too frequently in our references, since it is upon that authority alone that we are now enabled to determine with any degree of precision nearly the whole of those new species of *Papiliones*, the existence of which has been made known throughout Europe by the classic writings of that author, but of which no other evidence is now extant; for most of the collections existing at the time *Fabricius* was in England, and to which he refers, have been long since dispersed, and but for the care of the late Mr. Jones of Chelsea, who had preserved these invaluable authorities to the scientific world, the labours even of *Fabricius* in this department had become comparatively of very little value.

Papilio Zacynthus is a species of the first family of *Papiliones*, the *Equites Trojani*. It has much the habit of *Papilio Æneas*, a well known insect, described by *Linnæus*, and which is figured by *Roesel*, *Seba*, *Jablonsky*, and some other authors; but upon an attentive comparison it will be found to be very different. Its great

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similarity renders it of more importance to point out precisely the difference that prevails between them, and this the present figure it is presumed will render distinctly obvious.

In the species *P. Zacynthus* the wings are black: in the middle of the first pair is a large spot composed of two distinct colours, the anterior part being white, the posterior green, but on the underside the spot appears entirely white. *Papilio Æneas* has also a spot of green upon the anterior wings but without any portion of white. *Papilio Æneas* is a native of India, *Papilio Zacynthus* is from the Brasils.

FIGURE II.

PAPILIO DIMAS DIMAS'S BUTTERFLY.

ORDER

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob: wings erect when at rest. Fly by day.

* *EQUITES TROJANI*.—*Fabr.*

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented: above and beneath black: on the anterior pair, a white spot divided by veins: on the posterior pair a palmate sanguineous spot.

PLATE XXVII.

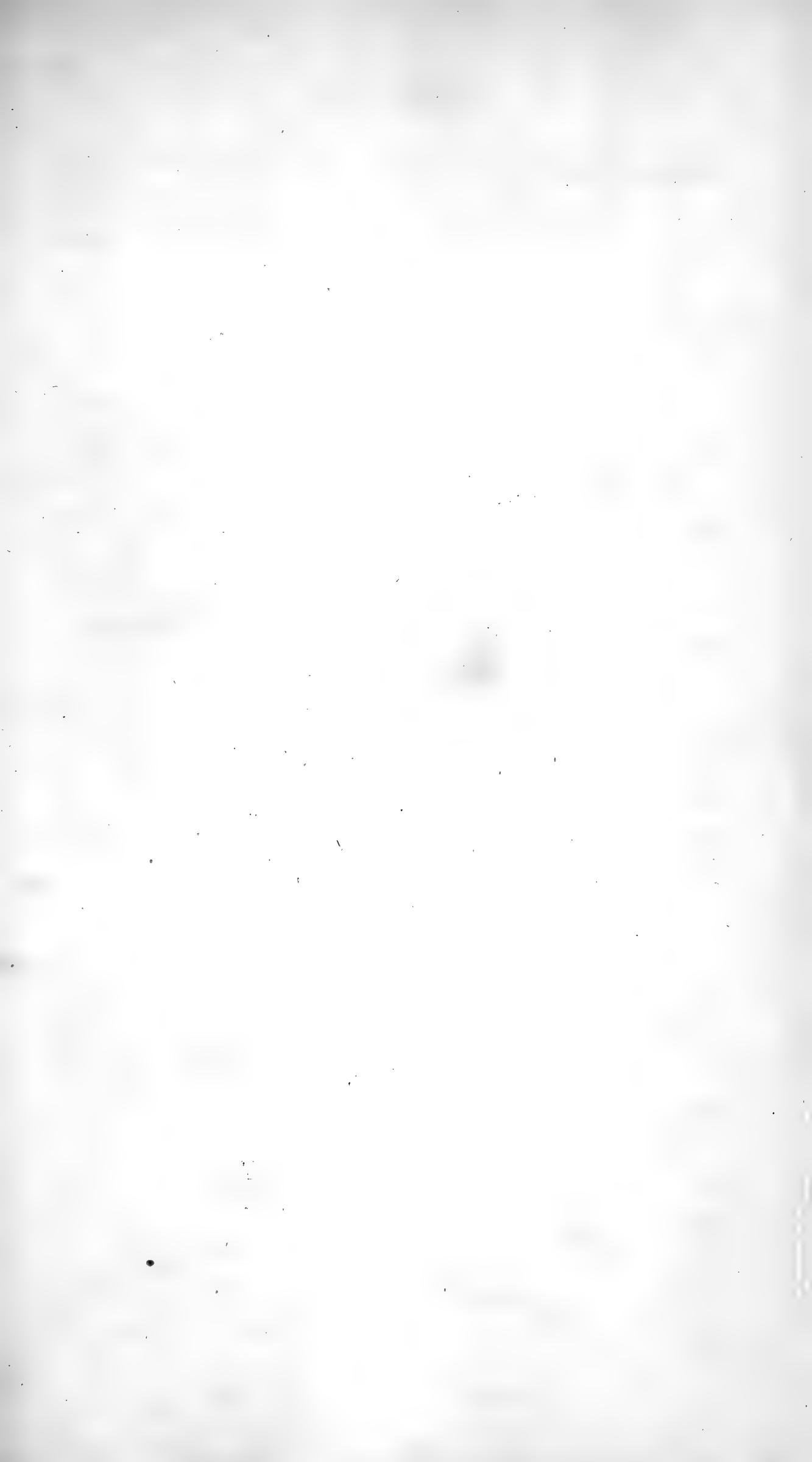
PAPILIO DIMAS: alis dentatis concoloribus nigris anticis macula
alba venis divisa, posticis sanguinea palmata.—
Fabr. Ent. Syst. T. 3. p. 1. p. 16. n. 47.

PAPILIO DIMAS —*Jon. fig. pict. 1. tab. 23.*

This, like the preceding, is a species we have been enabled to determine from the Fabrician MS. and the drawings of Mr. Jones. Fabricius, it appears, was not entirely decided in his mind whether the two Papiliones figured by Cramer, plate 29 fig. e, under the name of Hyppason, and that in the same plate, fig. f, named Euristeus, ought in reality to be considered as appertaining to this species ; and preferring the name of Dimas which had been previously given to it by Mr. Jones, he has described it under that name, allowing the references to Cramer, above quoted, to remain as synonyms. The Naturalist may rely with implicit confidence upon its being the Papilio Dimas of Jones and Fabricius.

This is rather larger than the former, the general colour black : on the anterior wings, in the middle, is a large white spot, so situated upon the junction of the ribs that they pass distinctly through it and give the appearance of a spot cleft at the sutures. The sanguineous palmate spot on the posterior wings is six cleft : and besides this there is a small spot of red upon the scollops, between the dentations at the margin of the posterior wings. The colours and spots appear beneath as above, but only paler.

Papilio Dimas is a native of Brazil, and bears a near affinity to Papilio Anchises.





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PLATE XXVIII.

MALLEUS MACULATUS

SPOTTED HAMMER SHELL, OR HOUND'S TONGUE.

*** BIVALVE.**

GENERIC CHARACTER.

Shell subquivalve, rough, deformed, generally lengthened and lobed or hammer-shaped: beaks small and divergent. Hinge without teeth, a lengthened conic hollow situated under the beaks and traversing obliquely the facet of the ligament. A lateral slope or groove at the side of the ligament for the passage of the byssus or beard with which the animal is furnished.

SPECIFIC CHARACTER.

Shell curved, with a single somewhat straight abbreviated lobe at the base: reddish yellow, clouded, spotted and dotted with fuscous.

U

PLATE XXVIII.

MALLEUS MACULATUS: testa arcuata, lobo basis unico sub-recta
abbreviato flavo-rufescente fusco nebulosa macu-
lata punctisque.

The singular object now before us, a shell no less remarkable for the peculiarity of its form than rarity of occurrence, is one of the most choice productions of the seas surrounding the Friendly Isles. The discovery of this shell, like that of many others, resulted from the assiduities of that eminent Naturalist and promoter of scientific knowledge, the late Sir Joseph Banks, and of Dr. Solander, who accompanied him in that memorable voyage of Captain Cook to the Southern Hemisphere, in which the Friendly Isles were discovered. The fine example of this shell, in particular, from which the drawing in our plate is taken, it may be also added, was one of those which were brought to this country by Captain Cook upon the return of the expedition, and which being shortly after presented to Sir Ashton Lever, remained in the Museum of that distinguished amateur from that period to the time of its dissolution in the year 1806.

When we consider the very remote situation of those islands, so distant from the usual track of all navigators, we cannot be surprised, admitting the species to be local in those seas, to find it has remained a very rare shell from the period of its discovery to the present time. In the course of many years only a few specimens have occurred to our observation, and while it has remained scarce with us, it appears to have been still more uncommon in the continental cabinets: very few of which, if we are informed correctly, were lately in possession of it.

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The first difficulty that arises in the mind of the naturalist upon the inspection of this shell results from the ambiguity of its generical peculiarities: we pause to consider where it should be placed. Linnæus, to whom, as it will be observed, the present shell was totally unknown, arranged the Hammer Shell, its nearest approximation, among the Ostreæ. The Hammer Shell, or as it is more usually denominated the Hammer Oyster Shell, had been discovered before the time of Linnæus; it had appeared in the work of Rumpfius, Seba, Gaultieri and Argenville, and the shell had been examined and described by him in the Museum of Ulrica, Queen of Sweden, under the name of *Ostrea Malleus*. That the hinge accords in some degree with that of the Ostreæ generally must be admitted, at the same time that it possesses other characters less easily reconciled to that genus, unless we embrace the Linnæan genus in all its latitude, and to this the conchologist of the present day cannot accede, at least without some little difficulties.

The conformation of this shell is very striking, and yet we perceive that its essential characteristics are less definitive than could be wished; there are several approximations in the general figure to be found among shells which nevertheless possess characters generically distinct. For many years this shell was known in this country under the name of "*Margaritifera maculata*," and the trivial English appellation of the "*Spotted Hound's Tongue*:" it appeared under those names in the Conchological Museum of M. de Calonne, while it remained in England, and in the catalogue of that museum, which is still extant, it will be found under those names. The epithet of Hound's Tongue is not inaptly applied to this shell, in allusion to the elongated form. The term *Margaritifera* does not refer to the form, but to the pearly gloss that appears upon the

PLATE XXVIII.

surface of the dark blue space lying within the shell, immediately below the hinge, and extending from thence about one fourth part of its whole length. This is the region in which the animal is attached by its ligament to the valves of the shell ; besides which, a gloss of pearly hue is observed to pervade the whole of the inner surface, only that it is most conspicuous in the darker disk of the shell. As a secondary character this pearliness is very remarkable in the shell before us, at the same time that as a generical denomination the term *Margaritifera* assigned to it from this circumstance alone is liable to objection ; because, the same pearliness prevails in many shells which have no relation whatever with the present, either in the form or structure of the hinge, and it is to these we must resort for its true essential character.

Lamarck constitutes many genera of the shells included in the *Ostrea* genus of Linnæus. His *Malléacées* comprehend five genera, *Crenatula*, *Perna*, *Malleus*, *Avicula*, and *Meleagrina*, all which are allied more or less remotely to the shell before us. To that particular family which is known among collectors by the designation of Hammer Oysters, he gives the name of *Malleus*, in the French *Marteau*, both alike implying the hammer like form of the species *Malleus*, which Lamarck assumes as the type of this genus. But even there after all the renovation that has been attempted, the result is not satisfactory, because this figure is by no means constant, even in the few species included by its author in that genus ; it contains but six species, and these are entirely at variance with each other. Thus for example, in *Malleus Vulgaris*, the common Hammer Shell, we have a species with three lobes, a lateral one of considerable size being advanced on each side the beaks : and another shell of the same species with only short lateral lobes instead of large ones. Admitting

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the hammer form to be still preserved in these, in the next species, *Malleus Normalis*, instead of two lobes, the hammer head, if it may be so expressed, has but a single lobe: in *Malleus Anatinus* there is only one lobe, and that very small; and in *Malleus Vulsellatus*, although characterised as "*lobo oblique porrecto*," the appearance of the shell implies rather the total absence of any lobe, for the lobe, if so it may be termed, is so indefinite, that it cannot be referred without violence to the genus *Marteau*, while we consider its hammer like form as a leading character of the genus. With exception to this inconstant character which may be qualified with the expression "deformed and generally hammer shaped," we have no objection to the *Malleus* genus, because the byssus of the animal by means of which it can affix itself to other bodies, and the peculiar sinus or sulcation of the hinge through which the byssus passes from the animal to those extraneous bodies, are sufficient to remove it from the *Ostrea* genus, in which case if we still adhere to the Linnæan method we can place it only among his *Mytili* or *Pinnæ*, and it has certainly less affinity with either of those than with *Ostrea*. Perhaps the name of *Perna* under which this shell has been mentioned a few years ago might have been as well preserved, but that name Lamarck assigns to an extensive genus of which *Ostrea Isognomum* is the type, and it is therefore better to retain the name *Malleus* than to alter it to another which could not fail at this time to create confusion. The same consequence would as unquestionably result were we to sub-divide the *Malleacées* into different genera according to the configuration of the shell or number of its lateral lobes.

The definition of *Malleus* in the *Règne Animal* of Cuvier appears to intimate the same objection; it does not consider the hammer like form of the shell as any criterion, it is only stated that the *Marteaux*

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are inequivalve and irregular, that they have a simple hollow for the ligament as in the oysters, but that they are distinguished by a slope at the side of the ligament for the passage of the byssus.

It is assuredly true that the presence of a byssus in this tribe of shells displaces them from any immediate analogy with the *Ostrea*, where as Cuvier remarks “*Linnæus left them.*” But, if however, we attentively examine the hinge of the common oyster, the two valves, and the oyster as it lies within the valves, we shall perceive with this exception a pretty near approximation. The great objection is, that the animal of the tribe of shells now before us protrudes a byssus from its body through a lateral opening on one side or slope of the ligament of the hinge; if we closely inspect the valves of the oyster, we also find a slight depression or hollow upon each side of the cartilage of the hinge; these are small, and usually somewhat lamellar. The oyster, moreover, as it lies in the shell, seems capable of expanding or spreading that part of the body which lies under the hinge laterally upon and into these depressions, a circumstance very easily observed in the half famished oyster, because these lateral expansions of the animal are then more visibly elongated along the passage of these lateral grooves of the hinge, and give the pointed end of the animal a somewhat cornuted appearance. Under the same circumstance these processes adhere as they lie in the hollow of these grooves, and thus suggests the idea of the animal having exerted itself by such extension to obtain refreshment through these lateral hollows. Those hollows are also so far pervious as to admit the ingress of moisture while the shells are closed, in the same manner as it is possible the *Malleus* genus may receive moisture under the same circumstance through the sinus, whence the byssus is protruded. These peculiarities considered, may perhaps afford some further

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justification of Linnæus in placing the hammer shells with the Ostreæ. It has been indeed advanced that Linnæus was not aware of these hammer shells being furnished with a byssus, or that he would have referred them to the Mytili, but this observation cannot be correct, because in the figure given of these shells by Seba, to which Linnæus refers, the byssus, which is very conspicuous, is represented pendent or hanging to a considerable length out of the shell.

From an attentive examination of the different Conchological authors, it does not appear to us that the shell before us has hitherto been figured, and we have reason also to believe that it has never been described. These circumstances are the more probable since, as we have before observed, the shell is at this time very little known among the Continental Cabinets. The nearest approach, so far as we can judge from the description, unassisted by any figure, is the Marteau Normal (Malleus Normalis) of Lamarck, a species defined by him as *testa biloba; lobo basis unico anticali ad normam*, our shell is certainly bilobate, for it has only one lateral lobe at the beak, and that moreover advances from the beak, pretty nearly, though not exactly, in a right line; but its general description does not sufficiently accord with our shell to authorise as a conclusion that they are the same. Lamarck informs us that there are two varieties of his Malleus Normalis, one of which is a native of the ocean of the Great Indies, the other of the seas of New Holland. The first, or Indian kind, he describes as being on the inside as well as outside of a black colour, with a longish lobe at the base of the shell.* The New Holland

* *Testa extus intusque nigra: lobo basis longiusculo. Animaux sans vertebres. T. 6. p. 145.*

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kind is described of a whitish colour, with the lobe at the base abbreviated.*

The two last-mentioned shells which Lamarck concludes to be varieties of the same species, may perhaps prove hereafter to be species distinct from each other, as Lamarck has himself shewn to be the case with respect to the common black and the white hammer shells. The black supposed variety of *Malleus Normalis* we apprehend to be distinct from the shell before us, but it is possible that the New Holland shell which he describes as being whitish, with the lobe at the base abbreviated, may be a worn or much depauperated specimen of our present shell; it certainly does not accord with our shell in any tolerable state of preservation.

Lamarck says nothing of any ruddiness or testaceous hues in his New Holland variety of *Normalis*, and admitting these colours to indicate that the shell had been found with its animal in a living state, we can scarcely conceive the dark fuscous spotting which is so conspicuous in the species could by any ordinary accident be so entirely obliterated as appears to be the case in Lamarck's specimen, if his New Holland variety of *Malleus Normalis* be really of this species; and it may be further added that if our present shell was actually intended by his *Malleus Normalis*, the defects of his shell has necessarily influenced his specific character and rendered it imperfect.

We have not adverted to *Malleus Anatinus* of Chemnitz, because the figure of that shell is ambiguous. There is a remote resemblance in the lateral appendages of the beaks, but in other

† *Var. testâ albidiâ; lobo basis abbreviato. Ibid.*

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particulars the resemblance is less obvious, the body is sometimes curved as in the shell before us and sometimes straight, but the edges of the valves are parallel, and the shell itself pellucid: the figure in Chemnitz is less than half the size of our shell. This inhabits the seas of Timor and the Nicobar Islands.

It should be observed in conclusion that there is a specimen of our species among the Hammer Shells in the British Museum, the *habitat* of which is indicated by the word “Amboina:” it is much smaller than our shell. Besides this we have lately seen another example from New Holland, of a growth still larger than the shell we have delineated.

We have entered thus minutely into the analogies of this shell from an apprehension we might otherwise in this instance submit as a new species an object that had been previously described. The result of our enquiry will tend to shew that if the species has not remained entirely unnoticed, it has never been described with much precision.



ORNITHOLOGY.

PLATE XXX.

PSITTACUS MELANOPTERUS BLACK WINGED PARAKEET.

ORDER

PICÆ.

GENERIC CHARACTER.

Bill falcated; upper mandible moveable and in general covered with a cere: nostrils rounded, placed in the base of the bill: tongue fleshy, obtuse, entire: feet formed for climbing.

SPECIFIC CHARACTER

AND

SYNONYMS.

Pale green, back and wings black: secondary wing feathers yellow, at the tip blue: tail purple with a black band.

PLATE XXX.

PSITTACUS MELANOPTERUS : pallide viridis, dorso alisque nigris,
remigibus secundariis luteis apice cæruleis, rectri-
cibus purpureis fascia nigra.—*Lath. Ind. Orn.*
T. 1. p. 132. n. 152.

PSITTACUS MELANOPTERUS : pallide viridis, dorso, tectricibus
alarum, caudæ fascia remigibusque primariis nigris,
secundariis flavescentibus cæruleo punctatis.—
Gmel. Linn. Syst. Nat. T. 1. p. 350. n. 132.

Perruche aux ailes variées.—*Buff. Hist. Nat. des Ois.* 6. p. 172.

Petite peruche de Batavia.—*Buff. Pl. enlum.* n. 791. f. 1.

Petite perruche de l'isle de Luçon.—*Sonner. it p. 78. t. 41.*

BLACK WINGED PARRAKEET.—*Brown Illus. t. 3.*

There are few beings of the feathered race more peculiarly distinguished for the splendid gaiety and rich variety of colours with which their plumage is adorned than the parrot race; for however they may differ in size from the magnitude of a kite or hawk, to that of the comparative diminutive thrush or sparrow, they are almost uniformly beautiful in this particular, and exhibit a diversity that is scarcely found in any other tribe. The species we have selected for our present representation is one of the smaller kinds of the family distinguished by the name of Parrakeets. Its total length is about six inches, its form robust or bulky in proportion.

The bill and legs of this bird are usually described as being dusky, in our specimen the bill is rather pale, tinged with brown

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PLATE XXIX.

PAPILIO TROS

TROS'S BUTTERFLY.

LEPIDOPTERA:

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob: wings erect when at rest. Fly by day.

* EQUITES TROJANI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings indented, tailed, above and beneath black; on the anterior wings an abbreviated white band: posterior ones with sanguineous spots.

PLATE XXIX

PAPILIO TROS: alis dentato caudatis concoloribus nigris: anticis
fascia abbreviata alba, posticis sanguinea macu-
lari. *Fabr. Ent. Syst. T. 3. p. 1. 10. 30.*
Jon. fig. pict. 1. tab. 23.

The tribe of Butterflies to which the Papilio now before us appertains, includes many of the larger and more interesting species of the Papiliones known. This tribe, as its designation implies, has been dedicated by Entomologists to the memory of the more distinguished worthies of the Trojan race, and above others to preserve the memory of those heroes whose exploits in the defence of that rich and potent station of the ancient world, the town of Troy, has been commemorated in the Iliad by the immortal Homer. Our present species refers indeed to a Trojan of an earlier period; it is named after Tros, the founder of the Trojan name. Tros was the fifth king of the Trojan dynasty, from its first establishment in the person of Scamander, and the last but three; the destruction of Troy being accomplished under the reign of Priam. The country before the time of Tros was called Dardania, from Dardanus, who is usually stiled the first of the Trojan kings, though in Phrygia he was preceded by Scamander and Teucer. Tros lived about fourteen hundred years before the Christian Era, and reigned king of Troy for the space of sixty years. It is in honour of this Trojan Monarch that Fabricius has given the present insect the name of Papilio Tros.

There are several Papiliones which bear a nearer or more distant resemblance to this Papilio, a circumstance that will impose some caution upon the Entomologist before he can venture to pronounce

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upon the species with decision: its characters are nevertheless sufficiently conspicuous, and when examined with due attention, enables us to determine the species from its nearest approximations, in a clear and satisfactory manner. The wings are dark above as well as beneath, the deeper colouring prevailing, however, on the upper surface as well as beneath; the anterior wings are marked with a broad abbreviated whitish band, and the lower wings with a large sanguineous or blood red spot of considerable magnitude. This sanguineous spot from lying in the disk of the wing is traversed and divided by the black nerves of the wing in such a manner as to appear in the form of six distinct oblong spots, placed laterally to each other: these spots appear also on the lower surface, in the same form as above, but the colour is rather paler.

As there is no figure extant of this large and fine Papilio in the work of any author, the delineation which we have the pleasure on this occasion to submit before our readers will doubtless be viewed with peculiar satisfaction. It need be only added that the species has been definitively determined upon the authority of Mr. Jones's collection of original drawings, to which Fabricius so constantly refers, and that for this reason its specific appellation may be implicitly upon by the scientific Entomologist.

This interesting Papilio is a native of Brazil.



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and greenish, and the legs inclining to flesh colour. The general colour of the head and neck is green, and the same colour prevails on the breast, belly, and thighs. Upon the crown of the head the green assumes a blueish tint, and on the neck appears enlivened with yellowish, the disk of a number of the feathers being of a yellow colour, with the edges brown, so as to present a kind of scolloped appearance. The back and wing coverts are deep black, with a somewhat velvet aspect; the greater quill feathers black. But one of the characters by which it is distinguished chiefly is the remarkable band of yellow, and its contiguous parallel band of blue by which the wings are traversed. This conspicuous band is formed by the secondary quill feathers, which being of a fine yellow, with the ends a lively blue, appear like two distinct bands, and from their gaiety of colouring are admirably relieved by the deep sable hues of the wings and back. In the bird before us the black colour of the back extends nearly to the tail, the ends of the tail coverts only being green. The most singular contrast in the appearance of its plumage arises from the very different colour of the tail: this is of a pale carnation, glossed or changeable to a delicate violet. The tail, with the exception of the two middle feathers, is traversed near the tip with a single broad band of black; the two middle feathers are of the same pale carnation colour as the rest, but rather more inclined to blueish.

The black winged Parrot is described as a native of Batavia and Luzonia. Our specimen we are assured is from the Brazils. We have also very lately had an opportunity of consulting an extensive series of drawings, representing the principal Natural productions of Surinam, made by an Englishman resident upon the spot, for his own amusement, and among those drawings have met with one

PLATE XXX.

of the black winged Parrakeet. Upon this authority we have no hesitation in pronouncing it to be a native of Surinam; and indeed it seems to be so well known in that part of the world that it is distinguished among the inhabitants by a peculiar name, it is called by them *Ajàlàlero*.



ENTOMOLOGY.

PLATE XXXI.

PAPILIO HIPPODAMIA

HIPPODAMIA'S BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob: wings erect when at rest. Fly by day.

**** P. HELICONII.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings oblong and entire; anterior pair black, with three hyaline bands: lower ones hyaline.

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PAPILIO HIPPODAMIA : alis oblongis integerrimis : anticis nigris :
fasciis tribus hyalinis, posticis hyalinis. *Fabr.*
Ent. Syst. T. 3. p. 1. 165. 509.
Jon. pict. n 149.

The Papiliones of the *Heliconii* tribe are named by Linnæus after the nymphs of the fabulous and mythological history of the ancient classics; an example that has been followed by Fabricius, and subsequently by other writers. Thus the present interesting insect is dedicated to commemorate among the votaries of science, the name of Hippodamia, a nymph feigned by the poets to be the daughter of Oenomaiis, and who according to the legends of classic lore, besides being much celebrated for her beauty, was distinguished for her swiftness in the race; and at length bestowed her fair hand in marriage upon Pelops, because in speed he excelled her.

This insect, which is of a moderate size, is of a light and elegant structure. The wings are black, but the transparent spots occupy so much space that the sable colouring does not appear predominant; it is less prevalent in the posterior than the anterior wings, and yet less upon the under surface than the upper. The form and disposition of these transparent spots with which the dark colour of this fly is variegated, are altogether characteristic, and deserve particular attention, because there are other insects of the same tribe which pretty nearly resemble it. From the middle of the anterior wing extends a transparent spot of a very elongated heart shaped form, having the point directed to the thorax, and a bar of black crossing it at the broader end, so as to give it the appearance of two distinct

ENTOMOLOGY.

spots ; and beyond this is another hyaline spot about the same size as the larger one of the two transparent spaces of which the first-mentioned spot consists. The posterior part of the wing is further marked with two bands of the same transparent texture as the others, each consisting of three distinct spots. The lower wings present a larger transparent space than the upper wings, the whole disk being hyaline with only the posterior limb or border opake, and of a black colour. The thorax and body is black.

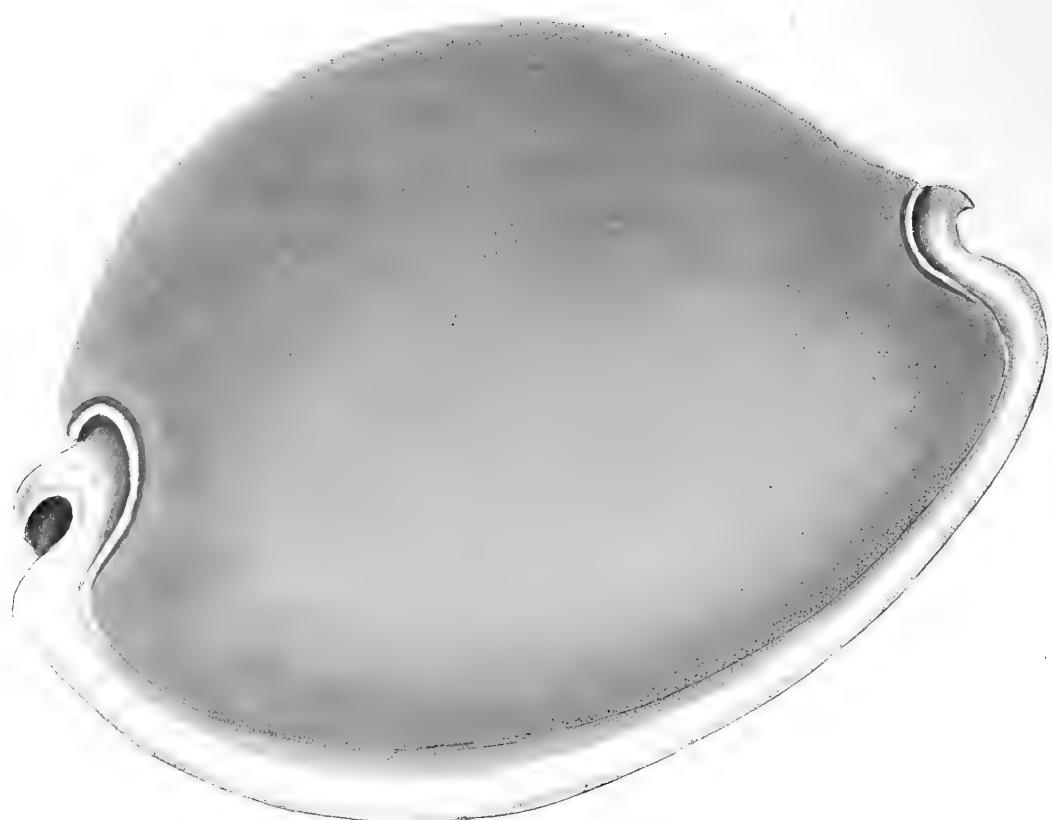
The hyaline spots as seen on the under side are of the same size and form as they appear above, but the opake spaces instead of being uniformly black as on the upper surface, are agreeably diversified with rufous and geminous dots of white : these double white dots are situated on the black border at the tips of the wings, three on that of the anterior pair, and three on that of the posterior ones.

From the very close analogy that prevails between this and several other species of the same tribe, it would, no doubt, have been a matter of considerable difficulty at this time to determine the Fabrician species *Papilio Hippodamia* with precision, if we had not possessed the means of reference to the Fabrician manuscripts, and the drawings in which it is delineated ; for it has remained to this period unfigured by any author. It will be observed that Fabricius does not refer for this species to the *Collectanea* of Mr. Jones, as in many other instances. The cause of this omission will admit of a very easy explanation ; Fabricius had seen the insect in the first instance in the cabinet of M. Mauduit, at Paris, to which he has referred. But subsequently when in England he found a drawing of the insect in the collection of Mr. Jones, and inscribed the name and character of the species upon the drawing, as it afterwards appeared in his

PLATE XXXI.

Entomologia Systematica ; and it is upon this authority that we are enabled to speak with certainty upon a species which, but for this circumstance, would be now involved in ambiguity. The figures in our plate are copied from the drawings of Mr. Jones, inscribed with the hand-writing of Fabricius.

At the time Fabricius described this species its *habitat* was unknown: we have lately met with it in a collection of Brasilian insects, and entertain no doubt of its having been brought with the rest from that part of the globe.



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PLATE XXXII.

CYPRAEA AURORA AURORA, MORNING-DAWN, OR, ORANGE COWRY.

* UNIVALVE.

GENERIC CHARACTER.

Shell univalve, involute, subovate, smooth, obtuse at each end: aperture effuse at each end, linear, extending the whole length of the shell and denticulated each side.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell ovate ventricose, and somewhat globose, orange without spots: margin white: throat orange or sometimes rosy.

CYPRAEA AURORA: ovato-ventricosa, subglobosa, aurantiâ immaculatâ: margine alba, fauce aurantia vel incarnata.

PLATE XXXII.

CYPRAEA AURANTIUM: testa subturbanata aurantia margine alba
immaculata fauce rutila. *Gmel. Linn. Syst. Nat.*
T. 1. p. 6. 3403. 121.

CYPRAEA AURORA: testa ovato-ventricosâ, turgidâ subglobosâ,
aurantiâ, immaculatâ; lateribus albis; fauce au-
rantiâ. *Lamarck T. 7. 382. 14.*

Every Conchologist is aware of the existence of this superb shell: its magnitude is considerable, and its colour too conspicuously distinct from that of all other species of its genus to be passed over without immediate observation.

The Cypraea generally are a tribe of shells peculiarly striking: the most common species possess an elegance of fervid colouring and politure that never fail to recommend them to attention. But a few years only have passed away, since the mantle decorations of the fire place in the apartments of fashion, besides images and jars of china porcelain, consisted of shells, among which the various kinds of Cowries were not esteemed the least ornamental. And they are sometimes still seen in such situations; while the grotesque statuary, the josses, and the dragons, of China and Japan, in conformity with a better taste, have wholly disappeared.

The shells of the Cypraea, genus which are most familiar to the generality of observers, are the spotted Cowries, and some others of usual occurrence. There are others which from their rarity are less extensively known, and among the number we may truly rank the

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species which we have now before us, the Orange Cowry, or as it is sometimes called, the “Morning Dawn.” The beauty of this shell, as well as scarcity, has established its celebrity; the species is well known, but few collections, excepting those of the more costly kind, possess the shell. Its magnitude is considerable, for its size is nothing inferior to that of the Spotted Cowry, which ranks in this respect the chief species of its family, while the distinction of its colour from that of all other shells of the Cypræa tribe at once attracts particular attention.

The colour of the back in this species is of a very fine orange, simple, and unadorned with any marks or spots whatever. The tint of orange varies in different shells from pale to darker, but whatever may be its deviations in this respect, the tint of colour is constantly deepest upon the back, and the transition as constantly becoming gradually paler or more diluted as the colour descends upon the sides towards the margin. This margin is rounded, projecting, and of a pure white, except at the throat, as it is termed, where a tint of red or reddish prevails to a small extent. The under surface of the shell is white, except at the sides where the orange colour of the back descends, spreads, and fades away into the white. The aperture of the shell is a longitudinal opening down the middle as usual in the other kinds of Cowry; the surrounding region of the shell is a pure white, but the edges of the opening, both which are beset with numerous linear teeth, are of a fine orange.

For the discovery of this extremely beautiful shell, like many other acquisitions of importance in the cabinet of the Conchologist, we stand indebted to the assiduities of that eminent Naturalist Sir Joseph Banks, and those who accompanied him in the celebrated voyage of Captain Cook round the world. They observed it among

PLATE XXXII.

the ornaments with which the natives of Otaheite had decorated their dresses, which were composed of feathers, and the barks of tress. To these garments they were attached by means of a string passing through a hole perforated for the purpose on one side of the shell. The natives were not so easily induced to part with these shells as the other decorations of their clothing, appreciating them at a much higher value. Our navigators were at first led to imagine these shells to be inhabitants of the seas surrounding Otaheite, in which particular they were at length undeceived by the natives who informed them to the contrary: they said the shells were found near an island at a great distance from Otaheite, and from the direction of the spot toward which they pointed, it was conjectured they meant the Fegee or Fidgi Islands, which are inhabited by the most ferocious cannibals throughout those seas.* Our navigators were therefore able only to

* We learn from Labillardière, one of the Naturalists attached to the expedition of Admiral Bruni d'Entrecasteaux, who went in search of La Perouse in 1791, 1792, 1793, that this report is true. When the French ships *Recherche* und *Espérance* touched at Tongataboo, there happened to be peace between them and Fidgi, and as usual when they are not at war, a considerable commerce was at that time carried on between them. This brought Vouacee, one of the chiefs of Fidgi, to Tongataboo soon after the French had cast anchor, and as he paid them frequently a visit, they were able to collect from him some useful information. Vouacee represented Fidgi to be very high land, of great fertility and lying distant in the north west direction about seventy-two *myriametres*. The myriametre reduced to our standard is six miles, one furlong, one hundred and fifty-six yards, and six inches, giving in total value about one hundred and forty-nine leagues, or four hundred and forty-seven miles. In the most favourable weather with the large double canoe the voyage to Fidgi from thence could not be less than three days, and when they had to struggle against the south winds they must ply to windward upwards of a month. The people of Tongataboo told them the people of Fidgi were cannibals: Vouacee strove to exculpate himself by answering that it was only the *touas*, or people of the lowest class, who eat human flesh. But the assurances of the natives of Tongataboo were fully confirmed in other quarters, and Labillardiere who observes they

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procure such specimens as were attached to the dresses of the natives, and these being almost constantly perforated for the better convenience of fastening them on safely, at once explains the reason of the Orange Cowry being so rarely met with undisfigured by such perforation.

The mention of this circumstance, which at this distant period can be little known, is moreover of some importance, because as the shells were really brought from Otaheite, it has been generally supposed to be a native of that island, and has even sometimes been called the Otaheitan Cowry. Gmelin, who records this shell under the name of *Cypræa Aurantium*, speaks of it as a native of the Friendly Isles, "habitat ad insulas amicas," resting his authority, we apprehend, upon the Conchology of Martyn, and which though published shortly after the return of Captain Cook, could not be so well informed upon the subject as the venerable friend who assured us it is neither a native of Otaheite, nor the Friendly Islands. Lamarck has subsequently observed that the species inhabits the seas of the Friendly Islands as well as those of Otaheite, and also of New Zealand. Upon what authority the *localities* have been increased to this extent is not stated. We have understood from very good authority that researches

devour their enemies to satiate their fury, is entirely satisfied the chiefs as well as touas are *Anthrophagi*. These people, notwithstanding this atrocity, are represented as being far more advanced in arts and industry than the people of other islands, who receive from them in time of peace many articles of ingenious workmanship and produce of their island, and it is, no doubt, by this means that the *Orange Cowry* has been introduced among the natives of Otaheite and other islands in those seas.

Besides its being satisfactory to ascertain beyond any doubt the habitat of the Orange Cowry, the Conchologist is assured that other shells of the most choice and valuable kinds inhabit the seas of this island, for which reason it is presumed the above information may not prove altogether unimportant.

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have been made repeatedly of late years by our navigators to discover the shells in those seas, and without effect; and this fact appears to be confirmed from the increasing value and importance attached to the species. We are indeed not entirely certain that any of these shells have ever been procured, except as before observed from among the natives of Otaheite, and the value of the shell has progressively advanced in consequence from four, or five, to ten pounds. A specimen in the collection of Mrs. Angus sold about three years ago in London for twenty guineas; thirty guineas have been in vain offered for another specimen within the last two or three years, and a collector at this period in London is in possession of another which it is understood cost him very lately fifty guineas. These circumstances, if we mistake not, conspire to prove, that the Orange Cowry is a far more local species than might be inferred from the observation of Lamarck.

Besides the name of Otaheitan Cowry, this shell has been also called the "Orange Cowry," and the "Morning Dawn," in reference to the latin "Cypræa Aurantium," and "Aurora," by both which it had been at different times distinguished. That of Aurantium alludes only to the prevailing orange colour of the shell, and has been given to it by Gmelin after Martyn. There is something more poetically elegant, and perhaps no less appropriate in the trivial name Aurora, which Lamarck adopts: we may in truth compare its beauteous fulvous hues fading into white with inexpressive softness, to the warm glowing tints and fainter blushes of an opening morning sky in summer. We have also adopted this name as well as Lamarck, for its peculiar elegance, in preference to that of Aurantium.

The origin of the epithet "Aurora," bestowed upon this shell has probably long since been forgotten; it arose from one of those

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fugitive events not likely to be recorded excepting only in the recollection of collectors; and those in whose immediate knowledge the circumstance occurred have long since passed this transitory scene and are perhaps ere this themselves forgotten. The relation though in some respects trivial, may afford amusement to the amateur: it serves to shew the origin of its name “Aurora” at the same time that it presents a striking illustration of that ardent zeal with which the science of Conchology was cultivated in this country nearly half a century ago; its authenticity may be relied upon. The circumstance as related to us by an old collector some years ago was briefly this; a specimen of the shell had very shortly after the return of the discovery ships been presented by one of the officers to a lady, which coming to the knowledge of a most zealous collector of that period, he solicited the indulgence of seeing it; and waited upon the lady for the purpose, upon an intimation that the favour would be readily granted. Madam, said the enraptured visitor, gazing in admiration upon the Cowry, which he now beheld for the first time, has this shell a price? will twenty guineas purchase this lovely gem? it will not answered the lady. Allow me then said its enthusiastic admirer to clasp it for a moment in my hands, and bending on one knee, at the same time pressing the shell to his lips, pronounced with an emphasis of poetic fervour, “thus do I salute the ‘Morning Dawn’ of the new discovered world!” Let poets reverence Venus the beauty of the Grecian seas: my idol is “Aurora,” this sea-born nymph of surpassing beauty, that rose upon the waves of the Southern deep!

Tu quoque cum Dea sis, Divâ formosior illâ
Concha per æquoreum quam vasa ducit iter.*

Sec. 6. *Basium.*

* We should not omit to mention that this shell was called *Aurora* by Dr. Solander about the same time, *Vide* his *MS.* Whether he was indebted

PLATE XXXII.

Abating somewhat of the romantic warmth with which the ideas of the venerable collector alluded to was expressed, it must be admitted that in point of beautiful simplicity this shell has never been surpassed by any subsequent discoveries in the southern hemisphere ; and it is no less singular than certain that the price of twenty guineas, which that collector named upon an imaginary valuation, has become the average standard value of a fine shell of this kind for some years past. At present they are more highly prized, because it is now pretty clearly ascertained that they are no longer to be procured among the natives of Otaheite ; and for this reason it is much more likely they will reach a still higher price than that the value of them should diminish. The shell we have represented is to be considered as a very fine specimen in respect to size as well as colour.

to this circumstance for the hint of so naming it, or on the contrary that the gentleman was aware of the name which Dr. Solander intended for it, is now beyond our means of ascertaining. It is more obvious that Chemnitz, and after him Lamarek, have received the name Aurora from one or both of these sources, although the anecdote may be itself forgotten.



London Published by E. Donovan & Mo's. Simpkin & Marshall Feb. 1. 1823.

ORNITHOLOGY.

PLATE XXXIII.

PSITTACUS MACULATUS

SPOTTED BREASTED PARRAKEET.

PICÆ.

GENERIC CHARACTER.

Bill falcated; upper mandible moveable and in general covered with a cere: nostrils rounded, placed in the base of the bill: tongue fleshy, obtuse, entire: feet formed for climbing.

SPECIFIC CHARACTER.

Green: crown, hind, head and nape black: temples cinereous: throat, neck, and breast fuscous with the margins of the feather sulphureous: shoulder scarlet: rump and middle of the abdomen sanguineous.

PLATE XXXIII.

PSITTACUS MACULATUS : *viridis* : *vertice, occipite, nuchaque*
nigris : *temporibus cinereis* : *gula, collo, pecto-*
reque fuscis marginibus pennarum sulphureis :
humeris coccineis : *uropygio abdomineque medio*
sanguineis.

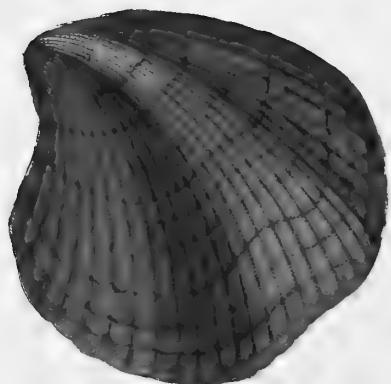
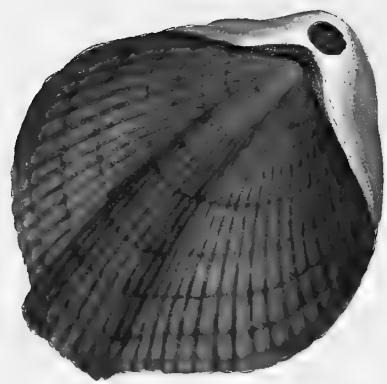
A very rare species of the Parrakeet tribe, and which is presumed to be a native of South America.

The length of this bird is nine inches and a half; the bill and legs blackish. The prevailing colour of the plumage green, front and crown of the head blueish green, the rest of the head and neck black: the feathers upon the face glossed with blue: a large ovate cinereous spot on the cheeks: throat and breast black varied with pale yellowish scollops, the margin of the feathers being a pale sulphureous yellow, the disk black: the black disk usually forming a kind of triangular spot with the point tending downwards. The wings are green, except the quill feathers, which are blue, and the butt of the wing or shoulder the colour of which is scarlet. The body beneath green with a large spot of sanguineous-purple on the abdomen. The lower part of the back and rump the same sanguineous purple colour as the abdominal spot: tail above green, the feathers purplish towards the end; beneath rufous brown.

This curious bird is nearly allied to *Psittacus Squammosus*, the *Scaly Breasted Parrakeet*, and in no very remote degree with another kind of Parrakeet, the *Wavy Breasted Parrot*, *Psittacus Lineatus*. The first of these our bird exceeds by at least an inch in length, the

ORNITHOLOGY.

other by an inch and a quarter. Instead of the dark colours of the head, as in our bird, the head and neck of *P. Squammosus* are dull orange. The darker colouring of our bird assimilates more nearly with *Psittacus Lineatus*, but in other respects is entirely different. We have considered it as a new species, at the same time that it must be observed from the very close analogy that prevails between this bird and the Scaly Breasted Parrakeet, it may possibly prove hereafter to be the adult bird of that kind rather than a distinct species.



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PLATE XXXIV.

TEREBRATULA SANGUINEA SANGUINEOUS LAMP-ANOMIA,

TEREBRATULA, OR, LAMP COCKLE.

BIVALVE.

GENERIC CHARACTER.

Shell inequivalve regular, somewhat triagonal: upper valve imperforate, lower valve beaked above the hinge, the beak usually incurvate, perforated at the tip, or grooved, for the passage of a short tendinous pedicle, by means of which it adheres to other bodies: Hinge with two teeth, and furnished with two osseous elevated and furcated processes arising from the disk of the upper or smaller valve, destined to support the animal.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell red, ventricose, suborbicular, longitudinally ribbed: upper valve depressed in the middle; the lower with the back elevated.

PLATE XXXIV.

TEREBRATULA SANGUINEA: testa rubrâ ventricosa, suborbiculata.

longitudinaliter costata : valva superiore in medio excavato : inferiore dorso elevato, apice incurvato perforato.

ANOMIA SANGUINEA. Obovata longitudinaliter sulcata, triloba ; sinu profundo, nate producta latere angulata foramen ambiente. *Solanders MSS.*—*Hab. in O. Pacifico. G. R. Forster.*

ANOMIA SANGUINEA. *Portland Catalogue.*

ANOMIA SANGUINEA. *Leverian Cat. sec. part. p. 15.*

ANOMIA SANGUINEA. *Dillwyn's Conch.* 1. 293. 21.

TEREBRATULA SANGUINEA. *Leach. Zool. Misc. t. 76.*

TEREBRATULA SANGUINEA. *Lamarck Anim. sans. Vert. T. 6.*
p. 1. p. 243.

Lampas Sanguineus, La Sanguinolente (*Anomia Sanguinea S.*)
Calonne Cat. Humph. MS.

This is one among the number of those very choice accessions to the Conchological knowledge of the last century, that was derived from the scientific labours of our first circumnavigators in the Southern Ocean : it occurred to them upon the coast of New Zealand, not in any abundance, but so far plentifully that after the Banksian Cabinet was supplied there were several specimens to spare for distribution among the friends of Sir Joseph Banks, Dr. Solander, and Captain Cook. From this little store the species passed in the first instance into several collections, and among others into that of the late Duchess of Portland, Dr. Chauncey, Mr. Cracherode, Mr. G. Humphrey, and

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some others. It has since occurred, but not in any abundance to later voyagers in those seas. And it is reputed also to have been met with in the Straits of Magellan.

The specimen of this rare shell which we have delineated, and which always was considered as one of the largest of its species known, once constituted part of the Testaceological collection of Sir Ashton Lever, having been presented to that eminent collector by Captain Cook, at the time of his return to England after his first voyage. There is a small hole pierced through the upper valve of this shell, and which, in the absence of all other information, induces the persuasion of its having been originally suspended like several other shells we have already mentioned, as an ornament or appendage to the dress of some New Zealander ; the aperture being so designed that the two valves could easily have been kept together by means of a string passing through this hole of the upper valve, and the opening in the beak of the lower one. The animal inhabitant is probably eaten by the New Zealanders, who besides being cannibals, subsist chiefly upon the marine productions of their shores, which their wives and female children obtain daily for them by swimming and diving into the sea. There is a rare species found in the Mediterranean Sea, *Anomia Vitrea* of Gmelin, which nearly approaches this species in point of size, and is eagerly sought after, we are told, by the people of those parts as a delicious food. We should, however, imagine from its scarcity, that it is only at the tables of the rich that this luxurious repast appears.

In adopting the genus *Terebratula* for the shell before us, some explanation may be expected for our departure from the Linnæan classification, for in the system of that author it is one of the *Anomia*

PLATE XXXIV.

Tribe, the term and character of *Terebratula* not being recognised by that author as generically distinct from the *Anomia*. Our reasons for this deviation shall be explained as briefly as it is possible: from the nature of those remarks, and the extent of enquiry with which it is connected, this cannot however be comprised within very slender limits.

In the Linnæan arrangement, the *Anomia* form a very comprehensive genus, and since in particular the fossil species are included it should certainly have been divided into several distinct sections or families in order to embrace the different tribes of those shells, which according to the character Linnæus has given of the genus must necessarily be referred to it. It is impossible without some modification of this kind to reconcile *Anomia Ephippium* and *Cepa*, with *Anomia Caput Serpentinus* or *Terebratula*, or either of them with *A. Placenta*; and there are besides these some other families which do not well accord, and which might perhaps be separated into distinct genera with great advantage, the fossil kinds especially, which are very numerous and much diversified in structure. It cannot be very material whether they be so divided into genera or be placed in different families under the general appellation of *Anomiæ*: they are obviously very dissimilar and should be kept apart, and we have examples of both these modes of classing the *Anomiæ* among the early Naturalists.

A late french writer, M. Bosc, speaking of this tribe of shells, observes, that Linnæus having confounded the *Terebratules* with the *Anomies*, Brugiere first established their differences, and Lamarck had fixed their characters. This observation is not sufficiently explicit, and may possibly imply more than the author of it has

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intended. It assumes as a conclusion that Linnæus committed an error in confounding these two genera, without informing us in what state of arrangement Linnæus found them. It may be inferred from this that they had been more accurately discriminated before his time, or on the contrary, that they never had been classed in any form, and that it was the want of knowledge in Linnæus which led him to confound shells together that were generically distinct. But whichever we are to understand, the conclusion is, that Linnæus had confounded them, and that it remained for Bruguiere and Lamarck to reform those errors of Linnæus, which all later Naturalists had left uncorrected, if not unobserved. Now really this view of the subject is not fairly taken if such an inference be intended. The result of a very little enquiry among the authors who preceded Linnæus, or were immediately subsequent to him, will assure us of the truth of this; and will convince us beyond a doubt, that the discrimination of neither of those authors was necessary either to furnish the Naturalists of the present day with the term *Terebratula*; to determine the differences that exist between them and the *Anomiæ*, or to fix the characters by which the *Terebratulæ* are distinguished.

The *Anomia* genus, instead of being devised by Linnæus, or *Terebratula* in particular, owing its invention to any modern writer, have been both so long established that the greatest difficulty is to determine where in the retrospect of authors our enquiries are to cease. Without proceeding further back than the last two centuries, it may be observed that *Fabius Columna* in his work "De Purpura," published at Rome in the year 1616, speaks of the *Anomiæ*; he calls them *Conchæ rariores Anomiæ*, and from that period at least the term *Anomia* has been received among Naturalists. Nor is the term *Terebratula* of much later origin. *Da Costa* in his Elements of

PLATE XXXIV.

Conchology informs us that from the time of Fabius Columna the word Anomia had become universal, that is as a general denomination for all the shells which Linnæus subsequently placed together under that name. The term *Terebratula* was given, says this writer, by Gualtieri; in plate 96 of his work, Gualtieri figures three recent kinds, and has made a particular genus for them, which he calls *Terebratula*. And it is further added in another place “ the Anomiæ are bivalves with unequal valves, and never eared, the beak of the largest or under valve is greatly produced, and rises or curves over the beak of the smaller or upper valve, and is perforated or pierced through like a tube, from which particular they have also obtained the name of *Terebratulæ*.

These remarks sufficiently establish the circumstance of the term Anomia, being a comprehensive title for all the shells which Linnæus subsequently placed together under that name, and also shews that we are not indebted to either Bruguiere or Lamarck for discriminating the *Terebratulæ*. We can ever go further back in this particular than Da Costa has done, for that able author is mistaken in supposing Gualtieri to be the first writer who had proposessed the genus *Terebratula*. Gualtieri published his work in the year 1724, and we happen to possess among other valuable MSS. of the celebrated Antiquarian, Hearne, the original copy of Lluid's *Lithophylacia Britannica*, as corrected for the press, dated Montgomery, 1698, in which the genus *Terebratula* is distinctly named: and this, as it appears from the date, was more than fifty years before the time of Gualtieri; and we have also the authority of our english Lister in 1694 for the like distinction. All these writers, it will be observed, preceded Klein, who has in a particular manner described the genus *Terebratula* in his *Methodus Ostraceologia*, published in 1753, but

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in which he does not speak of himself as having invented that term. “**TEREBRATULAS**, *Luidiano* titulo, vocamus **DIACONCHAS** anomalias, rostro parterebrato, vid. *Nomencl. Litholog. Promotum* hoc titulo.” His genus *Concha* ΤΡΙ'ΛΟΒΟΣ, genus *Concha* **ADUNCA**, genus **BURSULA**, and genus **GLOBUS**, are all sub-divisions of the *Anomiæ Conchæ* of other writers, divided according to their forms and other peculiarities, and in which particular attention is paid to the perforation or non-perforation of the beak; *Trilobos* being distinguished as “*vertice integro*,” *Bursula* as *Terebratulæformes* rostro non perforato, &c. And we may lastly mention that from some original MSS. of **Da Costa**, in our possession, it appears that *Anomia* was a general term for the whole family, and *Terebratula Anomiæ lævis* was the term by which the English and other Naturalists, long prior to the middle of last century, were accustomed to distinguish the same kind of shells which in the modern nomenclature of Conchology is also named generically *Terebratula*. **Da Costa**, as Librarian of the Royal Society, was in the habit of correspondence with the learned men of his time throughout Europe, and his local knowledge from this circumstance, though never committed to the press, is not likely to be disputed.

We could proceed yet further, but enough has surely been advanced to shew that so far from Linnæus having confounded the *Terebratula* with the *Anomia*, he left them precisely as he found them, placing them after the example of his predecessors, under the comprehensive term of *Anomia*, which they had assigned to them. And we have also said enough to prove that to ascribe the Genus *Terebratula* to either Bruguire or Lamarck can result only from our ignorance of that information which in former days was regarded as the best criterion of an able Naturalist, a correct knowledge of the labours of his predecessors.

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Under all its circumstances it may be a matter of some indifference to the scientific Naturalist whether in the arrangement of the Anomiæ we follow the concise method of the old writers and Linnæus among the number, or the diffuse distribution of later writers. If we place them in different families according to their characters, whether regarded as sectional distinctions of Anomia, or as distinct genera, we shall at least produce some consistency in the arrangement. But there is yet another mode of arrangement which appears to be the favourite theme with some Conchologists of the present day, and which it may be proper in this place to mention, namely, the classification of shells according to their animals. This has been attempted in the work of Cuvier, his “*Règne Animal*,” and the result of this endeavour, so far as it relates to the Anomia in particular, may in this place deserve our explicit observation. In this work (*Règne Animal*) Cuvier endeavouring to class the Anomiæ according to the animals known to inhabit them, as well as those which he imagines for the fossil tribes, so disperses them, that the Trochi, Turbines, Nautili, Volutæ, and indeed nearly the whole of the *Univalves* intervene between his two first genera of these *bivalves*, *Hyalæa* and *Anomia*; and the *Anomia tridentata* of Forskahl, which is the *Hyalæa* of this author, is placed with *Clio* (the shell of which is our *Bulla Aperta**) among the *Ptéropodes*. After the long interval occasioned by this introduction of the *Univalves* we find *Anomia*,† and *Placuna*, two of his genera together, but with another tribe of beings, the animal inhabitants being of his class *Acéphales*; and after another wide interval in which the bivalve *Mya*,‡ the multivalve *Pholas*,¶ the univalve *Teredo*,|| and the

* † ‡ ¶ || Many of these are found on our own coasts. *Vide Donovan's British Shells*, in which the figures and descriptions of a number of the species of these genera occur.

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naked or shell-less *Ascidia*, occur we find in a distant class among another tribe of animals, *Mollusques Brachopodes*, the genus *Terebratula*. It is here ascribed to Bruguiere, as in other works it is assigned to Lamarck. Such is the arrangement of this family in the *Règne Animal* of Cuvier, a form in which no cabinet, it must be acknowledged, could be arranged without embracing the most unprecedented anomalies ; nor can we doubt that if the animals of the fossil *Terebratulæ* and *Anomiæ* were known, for in this arrangement they rest on presumption only, they must be further separated in such a system than they are at present, some being perforated at the beaks, others imperforate, and some having the aperture under the beaks, all which demonstrates a difference in the structure of the animal, to whose use they were adapted.

From this analysis of the generical distinctions of the different families of the *Anomiæ* we may now be permitted to return to the shell before us, the object of our more immediate consideration, and respecting which there appears to be no less misconception among late writers than we have found already respecting the genera.

It appears that Dr. Leach had some short time since published a figure of this shell : his definition is altogether brief, and the information he affords less explanatory than might be desired : he quotes no authority or synonyms, and in his general description merely observes that "It seems to be a very rare species, a few specimens only having been received from New Zealand." *Vide. Zool. Misc. p. 76.* Lamarck assuming from these observations, as it may be presumed, that the shell had not been previously noticed, unless it were an *Anomia Capensis* of Gmelin, proposes it as a new species under the name of *Terebratula Sanguinea* of Leach, at the same time that he rejects

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his specific character, and assigns another to the species; the character given to it as a new species by Dr. Leach is “*Testa sanguinea, subtilissime et creberrime impresso-punctata, longitudinaliter costata, costis simplicibus; antica uniuendulata*”; that of Lamarck, “*Testa oblonga, irregulari, rubra, creberrime impresso punctata; striis transversis undulatis; margine denticulato*,” to which is added, “*Habite—les mers de la Nouvelle Zelande d'apres M. Leach.*” This seems to shew that the shell was only known to Lamarck, through the communication of the last-mentioned writer; and the suggestion is the more probable since the specimen in the British Museum has the same interrogation as to being the *Anomia Capensis* of Chemnitz, that is annexed by Lamarck to his description of the species. “*Je crois qu'on doit donner comme synoyme l'Anomia capensis Gmel, d'apres la citation de Chemniz; mais l'individu que j'avais sous les yeux, n'est pas assez entier pour affirmer ce rapprochement.*”

There is obviously some want of farther explanation in these details, the omission of which may possibly be supplied by tracing the history of this interesting shell from the time in which it first appeared in this country; for there are local circumstances connected with it which having escaped the mention of Dr. Leach, and consequently of Lamarck, have led to the erroneous conclusion that it had remained till very lately undescribed. Dr. Leach was probably not aware, or through some oversight omits to notice that the specific name which he has given to this shell was that assigned to it many years ago by Dr. Solander, and that it has uniformly borne the name of *Anomia sanguinea*, or (*Terebratula sanguinea*) among all the English Naturalists in consequence from the time of that learned friend and companion of Sir Joseph Banks down to the present

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period : It is the *Anomia sanguinea* of Dr. Solanders MSS. and was designated under that name in the Museum of the Dutchess of Portland : it appeared under the same appellation in the catalogue of that museum, published in 1786 : in the Calouian Museum and Catalogue, printed in the year 1795 ; it stood under that name also in the Museum of Sir Ashton Lever, and it appeared under the same denomination in the sale catalogue of that museum, published in the year 1806. Under all these circumstances it may be presumed the name must have obtained no small publicity, and we need scarcely add that the example of these authorities were followed in the Cabinets of english collectors generally, that happened to be in possession of the shell, among which was that of Mr. Cracherode, which was subsequently deposited in the British Museum. And lastly, it should be mentioned that it occurs under the same name in the Testaceological Manual of Mr. Dillwyn. Nothing therefore can be more certain than that the french writers are not correct in their opinion when they imagine that the shell had been so named in the first instance by Dr. Leach ; and it is no less certain that the credit of having first noticed the species is due to Dr. Solander, he described it more than forty years ago : his words as they stand in his manuscripts are, “*ANOMIA SANGUINEA obovato, longitudinaliter sulcata, triloba ; sinu profundo nate producta latere angulata foramen ambiente.*” Mr. Dillwyn has well expressed the character of this shell in his description of *Anomia Sanguinea*, but has by some oversight misquoted this passage of Dr. Solander’s manuscripts ; and by that means has confounded the *Anomia Sanguinea* of Dr. Solander, with his *Anomia Cruenta* ; this will be more fully shewn hereafter.

Upon this subject we have only lastly to observe that although Lamarck has deemed it requisite to give a specific character of this

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shell dissimilar from that of Dr. Leach, he omits to mention, as well as the former, that very conspicuous character of the species, the deep longitudinal hollow down the middle of the upper valve, and the dorsal elevation of the lower one. Lamarck, indeed, confesses that the individual which he had under his eyes, and consequently that which he describes, is not sufficiently perfect to authorize him in determining the analogy between that shell and the *Anomia Capensis* of Gmelin, which Chemnitz has figured; a circumstance that may explain the cause of this omission in the specific character of *Terebratula sanguinea*. Yet we should have thought a shell sufficiently entire to have enabled this ingenious Naturalist to have composed his character of the species, would have been so far perfect as to have justified some conclusion upon its analogy with the Gmelinian *Anomia Capensis*. We may confidently add that these two shells are totally distinct species, and are even generically different if we enter very scrupulously upon their distinctive characters. Dr. Solander had described this latter shell before the time of Gmelin under the name of *Anomia Cruenta*.

The representations of this choice testaceous production, which accompanies our present description, will, it is presumed, convey a more correct idea of the shell than can be expressed by words. The Leverian specimen from which, as before observed, these figures are taken, realized at the public hammer at the Leverian sale the sum of five guineas,* and it still remains so rare that there would probably be little, if any, diminution in the price were it again to be disposed of in the same manner at the present period. The shells of this kind vary in some small degree in the intensity of colour from a very deep sanguineous red to a paler hue.

* Last Day's Sale, lot 74, £5 5s.



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PLATE XXXV.

PAPILIO BELLADONNA

BELLADONNA'S BUTTERFLY.

LEPIDOPTERA.

GENERIC CHARACTER.

Antennæ thicker towards the tip, and generally terminating in a knob: wings erect when at rest. Fly by day.

**** HELICONII.

SPECIFIC CHARACTER

AND

SYNONYMS.

Wings oblong entire, black with somewhat hyaline spots: posterior pair with a yellow spot at the base, and two at the anal angle.

PAPILIO BELLADONNA: alis oblongis integerrimis atris sub-hyalino maculatis: posticis macula baseos anguloque ani maculis duobus flavis.

PLATE XXXV.

PAPILIO BELLADONNA : alis oblongis integerrimis atris : anticis
hyalino punctatis, posticis flavo maculatis. *Fabr.*
Ent. Syst. T. 3. p. 1. p. 180.

Papilio Belladonna. *Jon. fig. pict. 3. tab. 37. fig. 2.*

Statura P. Pasithoe at major. Corpus nigrum abdominis mar-
ginibus cinereis. Alæ atræ, cinereo punctatæ. Subtus concolores
at lineola maculaque baseos albis. Posticæ atræ, flavo maculatæ
macula baseos angulique ani majoribus. Subtus fere concolores.

A figure of this very rare and probably unique insect cannot fail, it is presumed, of proving an acceptable addition to the collectanea of the Entomologist: it is the only representation of the species now extant, and has been ascertained upon the authority of the only document we now possess of the insect intended in the Fabrician writings under the appellation of *Papilio Hel. Belladonna*.

Fabricius, as it appears from his references in his *Entomologia Systematica*, met with the drawings of this species in the collection of Mr. Jones, whose cabinet also possessed the original specimen from which the drawing was taken. It is from this individual example in the cabinet of Mr. Jones that the delineation in the annexed plate is copied.

This curious Papilio is one of the larger species of the *Heliconi* tribe to which it appertains. The wings are a blueish black, and rather closely studded with sub-hyaline or transparent spots, which

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are minutely speckled with black: those on the anterior wings are somewhat sagittate and disposed into two irregular bands towards the exterior half of the wings: those on the posterior wings are rather larger and more inclining to an ovate form; and three of the largest, namely, one at the base, and two at the anal angle, are of a bright yellow colour. The inner limb of the wing is grey inclining to yellowish. The head and thorax are black; the abdomen black with the sides pale yellow. The spots being semitransparent the appearance on the underside in a great degree corresponds with that above: there is a small difference, because instead of one yellowish spot at the base of the posterior wing, there are two, another smaller than that which appears at the base of that wing on the upper surface being situated below it. We have been more minute in the description of these spots, because upon an attentive comparison of the insect in Mr. Jones's Cabinet, with the Fabrician description, we perceive some small deficiency in the latter, a circumstance, it must be confessed, of rare occurrence in this author, but unquestionably worthy of our notice and correction, as it is the only authority upon which the species must in future rest.

The country of this interesting insect is unknown; it is remotely conjectured only that it may be Africa. The insect is represented with its wings expanded upon a sprig of

ERICA PARMENTARIA,
an elegant vegetable production of the Cape of Good Hope.





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PLATE XXXVI.

NERITA POLITA. *Var.*

PINK-BANDED VARIETY

OF THE

THICK POLISHED NERIT.

UNIVALVE.

GENERIC CHARACTER.

Animal a Limax. *Linn.** Shell univalve, spiral, gibbous, flattish at the bottom: aperture semi-orbicular and semi-lunar, pillar lip transversely truncated.

*** Perforated with the lips denticulated.

* Linnæus describes the animal of the Nerita as a limax, the body of which is oblong, with a fleshy shield above, and a longitudinal flat disk beneath: aperture on the right side within the shield: feelers, four, placed above the mouth: eyes, two, and situated one at the tip of each of the larger feelers. This character does not exactly accord with the animal of the Nerita, for in this tribe, instead of the eyes being situated upon the apex of the longer feelers, they stand each upon a kind of papilla, situated at the outer base of the longer feelers. And besides this, it differs in some less material peculiarities.

PLATE XXXVI.

SPECIFIC CHARACTER

AND

SYNONYMS.

Shell thick, glabrous, variously coloured, crown obliterated : lip toothed each side.

* Var. Variegated with white, red, and black.

NERITA POLITA : testa crossâ, glabré, colore variâ vertice oblitterato, labio utroque dentato.

* Ex albo rubro nigroque variegata.

NERITA POLITA : testa lævi : vertice oblitterato, labio utroque dentato. *Linn. Mus. Lud. Ulr.* 678. *n.* 392.

Linn. Syst. Nat. edit. 12. 2. 1254. 731.

Gmel. Linn. Syst. 6. 3680. 43.

NERITA POLITA. *Chemn.* 5. *t.* 193. *f.* 200. 2014.

Rumpf. Mus. *t.* 22. *fig.* 1. *k.*

Argenç. Conch. *t.* 7. *f.* *k.*

Seba Mus. 3. *t.* 38. *f.* 56.

Lamarck T. 6. *p.* 2. 192. 7.

In the arrangement of Cuvier, entitled "*Regne Animal*," the Mollusca or animal of the Nerita constitutes one of his "*Gasteropodes pectinibranches*," the character of which as defined by that author is quite as comprehensive and rather less explicit than the Linnæan limaces : he divides them into several families according to the pecu-

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liar form of their shells, for collectively almost every genera of the spiral univalves fall under this very general denomination, as well as many of those shells which are simply conic, as in the Linnæan classification they do under that of *Limax*. Cuvier mentions as a character of this tribe that their breathing apertures, with the exception of a family he calls *Cyclostomes*, are composed of a number of foliations ranged parallel to each other like the teeth of a comb. They have two feelers, and two eyes usually situated on a pedicle. The greatest difference between these animals consist in the presence or absence of the canal formed by a prolongation of the edge of the pulmonary cavity of the left side, a respiratory organ communicating with others by means of which the animal breathes without quitting its retreat in the water.

According to Lamarck the animal of *Nerita* has the foot large and short, with two pointed feelers, and the eyes raised upon a papilla at the exterior base of each.

Bosc is less diffuse than either. The animal of the *Nerites*, he observes, have the head flat and lunate, a little sloping to the two extremities: from the base of the head on each side issues two conic slender horns, one of which is twice the length of the other. The eyes are two little black points placed upon a trihedral tubercle at the exterior base of the horns, the mouth placed underneath the head and formed with a lip, thick and wrinkled. The foot almost round, flat beneath, convex above, and rather shorter than the shell. The mantle or fleshy prolongation entirely covers the interior of the shell and is slightly crenulated at the margin.

Denys de Montfort speaking of the species *Nerita Peloronata*, a shell abounding on the shores of the Antilles, observes that there are

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male and female animals of this kind, the two sexes being isolated or distinct individuals ; they are of an amphibious nature, living in the sea, from whence they ascend occasionally and crawl about the rocks.

Linnæus under the *Nerita* genus comprehends as well the imperforated or non-umbilicated kinds as those which have that perforation. The later continental writers divide these again, retaining the name *Nerita* to those which have no perforation ; those with a perforation are called *Natica*, by the french authors *Natrice*, after Adanson, *Gualtieri*, and *Favanne*. *Lamarck* has also a genus *Neritina*, and another *Navicella*, all which in the Linnæan system are of the *Nerita* tribe.

Nerita Polita is by no means an uncommon shell upon the coasts of the Indian Ocean, being found throughout their whole extent from Japan to the Cape of Good of Hope, and as it appears also upon the shores of many islands in the Indian and the Great Southern Ocean.

Besides being so very abundant in those parts, it may also be observed that no species of the testaceous tribe is more remarkable for the almost endless variety of colours, or the form and disposition of the spots, dots, and lineations, than the individuals of this kind of *Nerit*. There are, however, some few of its varieties which from being local are far less abundant than the rest, and the shell in particular which we have selected for the most conspicuous object in the annexed plate is one the most important of the number. The prevailing colour of the ordinary varieties is olivaceous, in some paler, in others more inclining to blackish ; the charactered marks in general yellowish, triangular or sagittate, and varied with short blackish lines.

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This is the usual appearance of the back or upper part of the shell, the region surrounding the mouth is white, including the lip, the inside of the mouth yellow, and this latter character appears constant throughout all the varieties of the species. The particular variety which constitutes the chief object in our plate, is of the red banded kind, the bands being diversified with red and white, disposed in spots, and lineations, with peculiar elegance. The varieties of this banded kind are scarce in general, but the particular kind which we have represented is unique, whether regarded for its magnitnde, its exquisite perfection, or brilliancy of colouring. We have represented the upper and under surface of this shell, together with the upper and under surface of a shell of the common kind, in order that by the contrast, the beauty of the former might be exemplified with greater perspicuity.

The history of this matchless variety of *Nerita Polita* is distinctly known: it is one of those shells which were brought from the Sandwich Islands by Captain Cook, when he returned from his first voyage of discovery in the South Seas. It was observed appended to an ornament worn at the breast of one of the natives, and was obtained in exchange, it is believed, for an iron hatchet; the Islander to whom it belonged esteeming it very much, and the English Officer being anxious to possess it. This circumstance of its having been affixed to an ornament worn by one of the savages, explains the reason of the shell being perforated, the hole having been made in order to pass a string through the shell to fasten it on the ornament securely. The shell was presented by Captain Cook to Sir Ashton Lever, in whose Museum it was subsequently deposited; and notwithstanding the defect above-mentioned, this little shell produced at the dissolution of the Leverian Museum, in the year 1806, the

PLATE XXXVI.

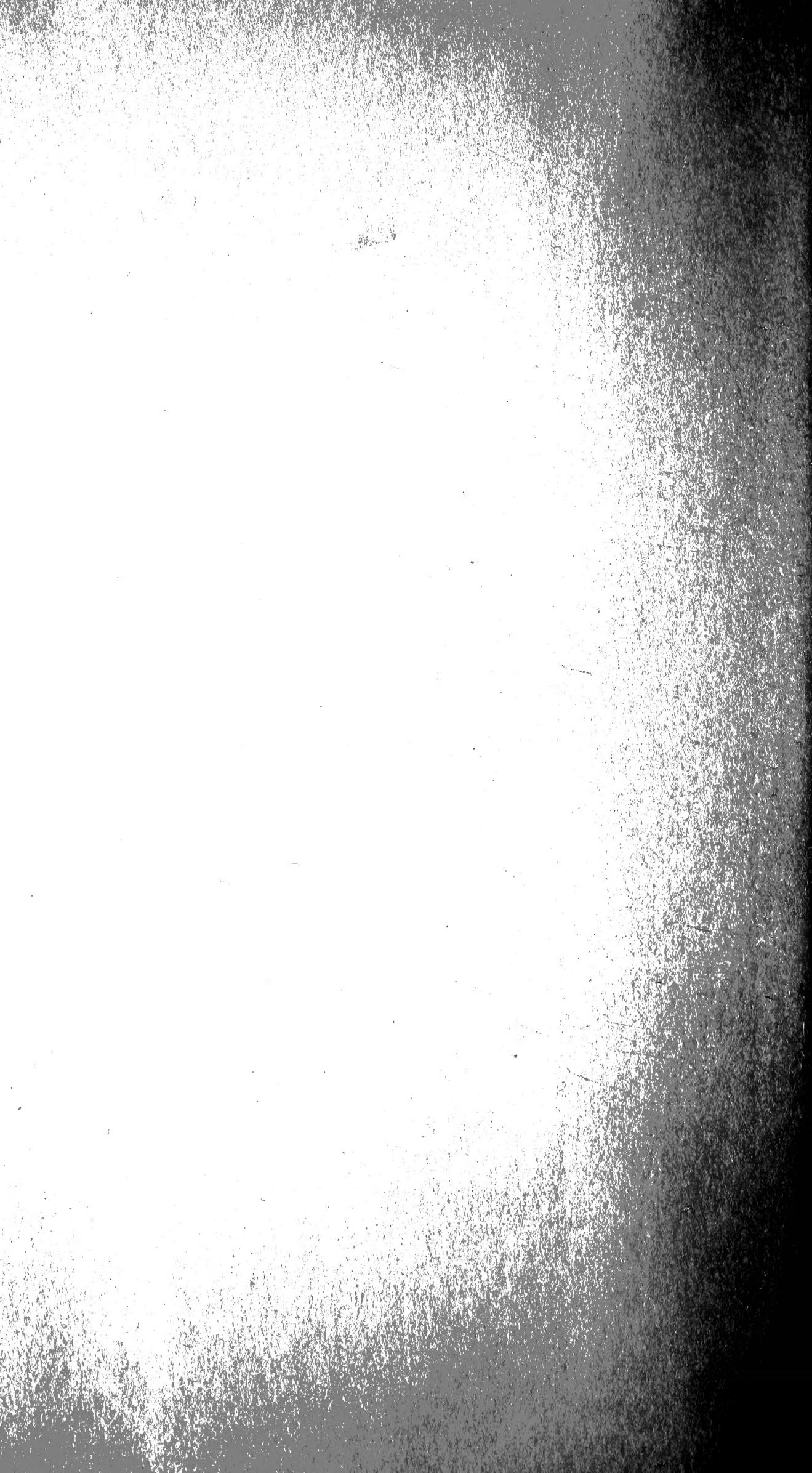
sum of nine pounds sterling, at the public hammer.* A celebrated collector, the late Mr. Noel Jennings, was the purchaser ; and it is understood that on the subsequent dispersion of the collection of Mr. Jennings, which took place a few years ago, that it became, with some other very rare shells of that collection, the property of Lord Mount Morris.

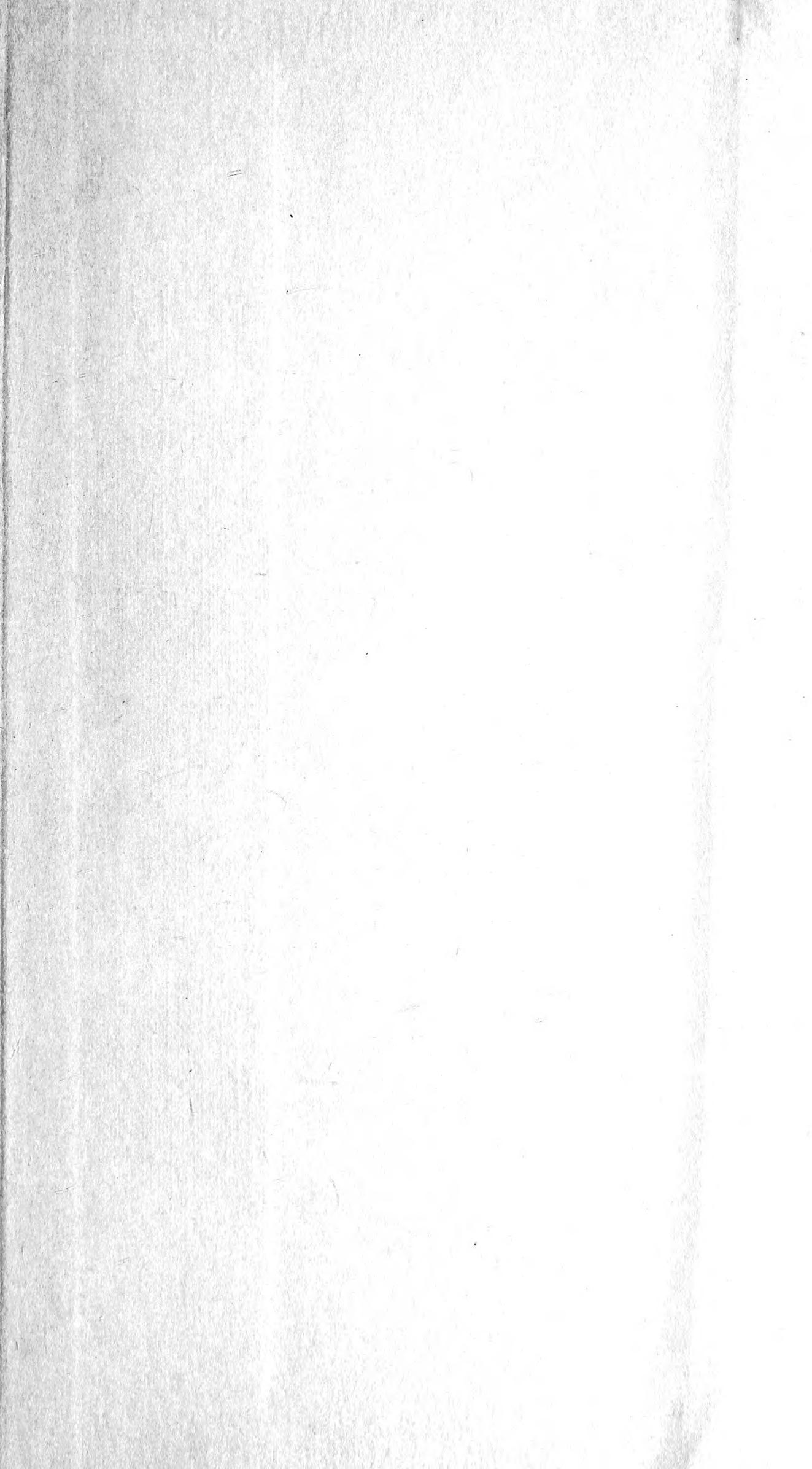
* Fifty-Eight Day (last day but two) lot 87, “*A most beautiful variety of the Painted Nerita, having three rich pink bands on a dark clouded ground taken from an ornament worn by a native of one of the Sandwich Islands.*”

END OF VOL. I.

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